OAH 23-2500-39782
MPUC E-002/CN-22-131, E-002/TL-22-132

STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS

FOR THE PUBLIC UTILITIES COMMISSION

In the Matter of the Certificate of Need and Route Permit Applications for the Minnesota Energy Connection Project in Sherburne, Stearns, Kandiyohi, Wright, Meeker, Chippewa, Yellow Medicine, Renville, Redwood, and Lyon counties in Minnesota

FINDINGS OF FACT, CONCLUSIONS OF LAW AND RECOMMENDATIONS

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FINDINGS OF FACT, CONCLUSIONS OF LAW AND RECOMMENDATIONS

This matter came before Administrative Law Judge Suzanne Todnem for a series of joint public hearings on a Certificate of Need Application (CN Application) (MPUC Docket No. E-002/CN-22-131) and a Route Permit Application (RP Application) (MPUC Docket No. E-002/TL-22-132) (collectively referred to as the Applications).

As detailed below, the Minnesota Public Utilities Commission (Commission) requested that the Administrative Law Judge prepare findings of fact, conclusions of law and recommendations, if any, on the merits of the proposed project, as well as permit conditions.

The Applications were submitted by Northern States Power Company doing business as Xcel Energy (Applicant or Xcel Energy). The proposed Minnesota Energy Connection Project (Project) would traverse Sherburne, Stearns, Kandiyohi, Wright, Meeker, Chippewa, Yellow Medicine, Renville, Redwood, and Lyon counties in Minnesota.

Public hearings on the Applications were held in the afternoons and evenings of October 29 and 30, 2024, and November 6 and 7, 2024. The hearing record remained open until November 25, 2024, to receive written public comments.

Lisa M. Agrimonti and Haley Waller Pitts, Fredrikson & Byron, P.A, and Matthew A. Langan, Principal Agent, Siting and Land Rights for Xcel Energy, appeared on behalf of Xcel Energy.

Richard E.B. Dornfeld, Assistant Attorney General, and Andrew Levi, appeared on behalf of the Department of Commerce, Energy Environmental Review and Analysis (EERA).

Scott E. Ek, Energy Facility Planner - Minnesota Public Utilities Commission, appeared on behalf of the Commission Staff.

STATEMENT OF ISSUES

1. Does the Environmental Impact Statement (EIS) include the information required by applicable law, and was it prepared in compliance with applicable law?

2. Has Xcel Energy satisfied the criteria established in Minn. Stat. § 216B.243 and Minn. R. Ch. 7849 for a Certificate of Need for the Project?

3. Has Xcel Energy satisfied the criteria established in Minn. Stat. Ch. 216E and Minn. R. Ch. 7850 a Route Permit for the Project?

4. If the proposed project satisfies the regulatory standards, which route should be selected?

SUMMARY OF RECOMMENDATIONS

The Administrative Law Judge recommends that the Commission determine that the EIS developed by EERA for these proceedings was prepared in compliance with applicable law, thoroughly addresses the issues and alternatives raised during the scoping process, and responds to comments received during the draft EIS review process.

The Administrative Law Judge recommends that the Commission issue the Applicant a Certificate of Need for the Project. The Administrative Law Judge concludes that the Applicant has satisfied all relevant criteria set forth in Minnesota law for a Certificate of Need for the Project and that there are no statutory or other requirements that preclude granting the Application.

The Administrative Law Judge further concludes that the Applicant has satisfied all relevant criteria set forth in Minnesota law for a route permit for the Project and recommends that the Commission grant a route permit for the Applicant's Preferred Route, as identified in the Direct Testimony of Matthew Langan, with modification to include the northern most portion of Route Segment 223 as described in Finding 215.

Based upon information in the hearing record – including, the Applications, the EIS, testimony at the public hearings, written comments from the public, exhibits received during this proceeding – the Administrative Law Judge makes the following:

FINDINGS OF FACT

I. THE APPLICANT

1. Northern States Power Company, doing business as Xcel Energy, is a Minnesota corporation headquartered in Minneapolis, Minnesota, that is engaged in the

business of generating, transmitting, distributing, and selling electric power and energy and related services in the states of Minnesota, North Dakota, and South Dakota.[1]

2. Xcel Energy is a wholly owned utility operating company subsidiary of Xcel Energy Inc. and operates its transmission and generation system as a single integrated system with its sister company, Northern States Power Company, a Wisconsin corporation, together known as the NSP Companies. The NSP Companies are vertically integrated transmission owning members of Midcontinent Independent System Operator, Inc. (MISO). The NSP Companies are among the largest transmission owning members of MISO with more than 8,500 miles of transmission lines and approximately 550 transmission and distribution substations.[2]

3. In Minnesota, Xcel Energy provides electric service to 1.3 million customers.[3]

II. PROCEDURAL HISTORY

4. On May 3, 2022, the Applicant filed a Notice Plan Petition for the CN Application and a Request for Exemptions from certain regulatory requirements.[4]

5. On May 9, 2022, the Commission issued a Notice of Comment Period regarding the request for exemption, requesting initial comments by May 23, 2022, reply comments by May 31, 2022, and supplemental comments by June 6, 2022.[5]

6. On May 13, 2022, the Applicant filed an informational compliance filing with the Commission describing the forthcoming Request for Information (RFI) process, an outcome of its Upper Midwest Integrated Resource Plan (IRP).[6]

7. On May 19, 2022, the Minnesota Department of Commerce, Division of Energy Resources (DER) submitted comments recommending that the Commission approve Applicant's Notice Plan conditioned upon a revision to the EERA contact in any later notices.[7]

8. On May 23, 2022, LIUNA Minnesota & North Dakota (LIUNA), the International Union of Operating Engineers (IUOE) Local 49 and North Central States

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[1] Exhibit (Ex.) Xcel-2 at 4 (RP Application).
[2] *Id*.
[3] *Id*.
[4] Notice Plan (May 3, 2022) (eDocket Nos. 20225-185473-01 and 20225-185473-02); Request for Exemptions from certain Certificate of Need Application Requirements (May 3, 2022) (eDocket Nos. 20225-185473-01 and 20225-185473-03).
[5] Notice of Comment Period on Request for Exemption from Certain Certificate of Need Application Content Requirements (May 9, 2022) (eDocket No. 20225-185603-01).
[6] Informational Compliance Filing (May 13, 2022). (eDocket No. 20225-185772-01).
[7] DER Comments (May 19, 2022) (eDocket No. 20225-185893-01).

Regional Council of Carpenters (NCSRCC) submitted comments encouraging the Commission to grant the exemptions requested by the Applicant.[8]

9. With respect to comments from the Minnesota Department of Commerce, EERA stated that it had no comment on Applicant's exemption request, whereas DER urged the Commission to approve the request for exemptions with certain conditions.[9]

10. On May 31, 2022, Applicant filed reply comments agreeing to update the EERA contact information in the draft notice and requesting that the Commission approve the exemption request, with DER's recommendations.[10]

11. On June 2, 2022, DER submitted supplemental comments concerning the Applicant's exemption request and agreed that the data Xcel Energy described in the Applicant's reply comments will be sufficient to complete the petition and begin the proceedings.[11]

12. On June 28, 2022, the Commission issued an order approving the Notice Plan and approving exemptions from certain certificate of need application data requirements conditioned on Xcel Energy providing alternative data.[12]

13. On August 4, 2022, the Commission filed public comments it received on the Project.[13]

14. On November 7, 2022, the Applicant submitted a compliance filing demonstrating that Xcel Energy had completed its Notice Plan, as approved by the Commission on June 28, 2022.[14]

15. On November 10, 2022, the Commission filed public comments that were received outside the comment period.[15]

16. On March 9, 2023, the Applicant filed the CN Application for the Project.[16]

17. On March 17, 2023, public comments regarding the Project were filed.[17]

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[8] LIUNA Comments (May 23, 2022) (eDocket No. 20225-186006-01); IUOE Local 49 and NCSRCC Comments (May 23, 2022) (eDocket No. 20225-185984-01).
[9] ERRA Comments (May 23, 2022) (eDocket No. 20225-185989-01); DER Comments (May 23, 2022) (eDocket No. 20225-185893-01).
[10] Xcel Energy Comments (May 31, 2022) (eDocket No. 20225-186229-01).
[11] DER Comments (June 2, 2022) (eDocket No. 20226-186323-01).
[12] Commission Order (June 28, 2022) (eDocket No. 20226-186932-01).
[13] Public Comments Batch 1 (Aug. 2, 2022) (eDocket No. 20228-188115-01).
[14] Notice Plan Compliance Filing (Nov. 7, 2022) (eDocket Nos. 202211-190448-01, 202211-190448-02, and 202211-190448-03).
[15] Public Comments (P. Soine) (Nov. 10, 2022) (eDocket No. 202211-190559-01).
[16] CN Application and Appendices (March 9, 2023) (eDocket Nos. 20233-193783-01, 20233-193783-02, 20233-193783-03, 20233-193783-04, and 20233-193783-05) (hereafter, the "CN Application").
[17] Public Comments (T. Libbesmeier) (March 17, 2023) (eDocket No. 20233-194079-01); Public Comments (M. Wedin) (March 17, 2023) (eDocket No. 20233-194063-01).

18. On March 17, 2023, the Applicant filed the Confirmation of Newspaper Notice Publication.[18]

19. On March 21, 2023, DER filed comments recommending that the Commission determine that the CN Application is substantially complete upon submission of additional data.[19]

20. On March 22, 2023, the Commission issued a Notice of Comment Period. It sought feedback regarding the completeness of the CN Application, and requested initial comments by April 5, 2023, reply comments by April 12, 2023, and supplemental comments by April 17, 2023.[20]

21. On April 5, 2023, EERA submitted comments regarding the completeness of the environmental information in the CN Application. It regarded the "environmental information to be substantially complete" but urged the inclusion of additional detail.[21]

22. On April 6, 2023, IUOE Local 49 and NCSRCC submitted comments recommending that the Commission find the CN Application complete and use the informal process.[22]

23. On April 7, 2023, the Commission filed public comments it received on the Project.[23]

24. On April 12, 2023, the Applicant filed Reply Comments regarding the completeness of the CN Application.[24]

25. On April 17, 2023, DER submitted Supplemental Comments recommending that the Commission determine Xcel's CN Application, as supplemented by Xcel's reply comments, to be complete.[25]

26. On April 18, 2023, EERA submitted comments stating that the EERA staff found the environmental information provided by the Applicant to be substantially complete.[26]

27. On April 27, 2023, the Commission filed proposed consent items regarding the completeness of the CN Application and the process to be used in evaluating the CN Application.[27]

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[18] Confirmation of Newspaper Notice Publication (March 17, 2023) (eDocket No. 20233-194066-01).
[19] DER Comments (March 21, 2023) (eDocket No. 20233-194135-01).
[20] Notice of Comment Period (March 22, 2023) (eDocket No. 20233-194143-01).
[21] EERA Comments (April 5, 2023) (eDocket No. 20234-194525-01).
[22] IUOE Local 49 and NCSRCC Comments (April 6, 2023) (eDocket No. 20234-194579-01).
[23] Public Comments (J. Huisinga) (Apr. 7, 2023) (eDocket No. 20234-194611-01).
[24] Reply Comments (Apr. 12, 2023) (eDocket No. 20234-194740-01).
[25] Supplemental Comments (Apr. 17, 2023) (eDocket No. 20234-194831-01).
[26] ERRA Comments (Apr. 18, 2023) (eDocket No. 20234-194931-01).
[27] Proposed Consent Items (Apr. 27, 2023) (eDocket No. 20234-195301-04).

28. On April 27, 2023, the Commission filed public comments it received on the Project.[28]

29. On May 2, 2023, the Commission filed a public comment from Wanda Urdahl.[29]

30. On May 2, 2023, the Commission issued an Order accepting Xcel Energy's CN Application as complete and authorizing the use of the informal review process under Minn. R. 7829.1200. The Commission also filed minutes of the May 2, 2023, consent calendar subcommittee meeting.[30]

31. On May 17, 2023, the Commission filed a public comment submitted by the Township of Harvey in Meeker County, Minnesota.[31]

32. On May 18, 2023, the Applicant filed a Revised CN Application for the Project.[32]

33. On May 24, 2023, the Commission filed a public comment it received.[33]

34. On June 7, 2023, the Commission issued a comment replying to Lisa Newberger.[34]

35. From June 8, 2023, to September 11, 2023, the Commission filed 13 public comments it received on the Project.[35]

36. On June 16, 2023, the Commission filed the Notice of Commission Meeting for its June 29, 2023, meeting.[36]

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[28] Public Comments – Batch 1 (Apr. 27, 2023) (eDocket No. 20234-195297-01).
[29] Public Comments (W. Urdahl) (May 2, 2023) (eDocket No. 20235-195520-01).
[30] Order (May 2, 2023) (eDocket No. 20235-195506-01); Consent Items (May 2, 2023) (eDocket No. 20235-195494-04).
[31] Public Comments (Township of Harvey) (May 17, 2023) (eDocket No. 20235-195895-02).
[32] Revised CN Application and Appendices (May 18, 2023) (eDocket Nos. 20235-195956-01, 20235-195956-02, 20235-195956-03, and 20235-195956-04).
[33] Public Comments– L. Newberger (May 24, 2023) (eDocket No. 20235-196103-01).
[34] MPUC Reply Letter to Lisa Newberger (June 7, 2023) (eDocket No. 20236-196432-02).
[35] Public Comments (K. and E. Donnay) (June 8, 2023) (eDocket No. 20236-196453-02); Public Comments (K. Roserow) (June 14, 2023) (eDocket No. 20236-196569-01); Public Comments (G. and R. Neuman) (June 14, 2023) (eDocket No. 20236-196568-01); Public Comments (W. Urdahl) (June 16, 2023) (eDocket No. 20236-196644-01); Public Comments (S. McCan) (June 21, 2023) (eDocket No. 20236-196717-01); Public Comments (L. Newberger) (June 26, 2023) (eDocket No. 20236-196875-01); Public Comments (L. Newberger) (June 28, 2023) (eDocket No. 20236-196984-01); Public Comments (J. Pierskalla) (June 30, 2023) (eDocket No. 20236-197166-01); Public Comments (J. Junkermeier) (July 28, 2023) (eDocket No. 20237-197829-02); Public Comments (B. Nordgaard) (July 31, 2023) (eDocket No. 20237-197866-01); Public Comments (Meeker County) (Aug. 8, 2023) (eDocket No. 20238-198073-02); Public Comments (M. Murray) (Aug. 16, 2023) (eDocket No. 20238-198283-01); and Public Comments (L. Newberger as Trustee for G. Neuman) (Sept. 11, 2023) (eDocket No. 20239-198853-01).
[36] Notice of Commission Meeting (June 16, 2023) (eDocket No. 20236-196613-03).

37. On June 21, 2023, the Commission staff filed Briefing Papers, and the Commission met to consider CN Application completeness on June 29, 2023.[37]

38. On June 28, 2023, the Commission filed an Ex Parte Communication Report.[38]

39. On July 24, 2023, the Commission filed a public comment received outside the comment period.[39]

40. On August 10, 2023, the Commission issued an Order authorizing joint proceedings to be held on the Applications.[40]

41. On August 16, 2023, the Commission filed a public comment it received.[41]

42. On August 25, 2023, the Applicant filed a letter discussing Project updates and considerations regarding the Project.[42]

43. On August 28, 2023, Carol Overland filed a comment on the Project.[43]

44. On October 30, 2023, the Applicant filed the Route Permit Application.[44]

45. On November 6, 2023, the Commission issued a Notice of Comment Period regarding the completeness of the RP Application. It requested initial comments by November 20, 2023, reply comments by November 27, 2023, and supplemental comments by December 4, 2023.[45]

46. On November 17, 2023, EERA submitted comments recommending that the Commission accept the RP Application as substantially complete and take no action to establish an advisory task force.[46]

47. On November 20, 2023, the IUOE Local 49 and NCSRCC submitted comments recommending that the RP Application be determined complete.[47]

48. On November 20, 2023, Jason and Laura Pierskalla filed a comment regarding the Project.[48]

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[37] Briefing Papers (June 29, 2023) (eDocket No. 20236-196735-01).
[38] Ex Parte Communication Report (June 28, 2023) (eDocket No. 20236-196993-01).
[39] Public Comments (B. Rosenow) (July 24, 2023) (eDocket No. 20237-197716-02).
[40] Ex. PUC-1 (Order Authorizing Joint Proceedings).
[41] Public Comments (M. Murray) (Aug. 16, 2023) (eDocket No. 20238-198283-01).
[42] Ex. Xcel-1 (Letter – Project Updates).
[43] Overland Comments (Aug. 28, 2023) (eDocket No. 20238-198566-01).
[44] Exs. Xcel-2 – 10 (RP Application, Appendices and Notice).
[45] Ex. PUC-2 (Notice of Comment Period on Application Completeness).
[46] Ex. EERA-1 (EERA Completeness Comments).
[47] IUOE Local 49 and NCSRCC Comments (Nov. 20, 2023) (eDocket No. 202311-200600-01).
[48] Pierskalla Comments (Nov. 20, 2023) (eDocket No. 202311-200590-01).

49. On November 21, 2023, and December 1, 2023, the Commission filed seven public comments it received regarding the RP Application's completeness.[49]

50. On November 27, 2023, the Applicant filed Reply Comments regarding the RP Application's completeness.[50]

51. On December 1, 2023, the Applicant filed the Rule 7850 Notice Compliance Filing, stating it had complied with all requirements under Minn. R. 7850.2100.[51]

52. From December 6, 2023, to January 17, 2024, the Commission filed seven public comments it received regarding the Project that were received outside of the comment period.[52]

53. On December 8, 2023, the Commission filed its Notice of Commission Meeting.[53]

54. On December 12, 2023, the Commission filed Briefing Papers and Agenda regarding the December 21, 2023, Commission Meeting.[54]

55. On December 14, 2023, EERA filed a public comment it received.[55]

56. On December 27, 2023, DER filed a public comment it received.[56]

57. On January 4, 2024, the Commission filed a sample route permit for the Project.[57]

58. On January 5, 2024, EERA filed a public comment it received.[58]

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[49] Public Comments (Batch 1) (Nov. 21, 2023) (eDocket No. 202311-200663-01); Public Comments (J. Pierskalla) (Nov. 21, 2023) (eDocket No. 202311-200659-01); Public Comments (K. Rosenow) (Nov. 21, 2023) (eDocket No. 202311-200639-04); Public Comments (B. Rosenow) (Nov. 21, 2023) (eDocket No. 202311-200639-02); Public Comments (W. Urdahl) (Nov. 21, 2023) (eDocket No. 202311-200638-02); Public Comments (R. and D. Schabel) (Nov. 27, 2023) (eDocket No. 202311-200728-01); Public Comments (B. Nelson) (Dec. 1, 2023) (eDocket No. 202312-200899-02).
[50] Ex. Xcel-11 (Reply Comments).
[51] Ex. Xcel-12 (Compliance Filing – Rule 7850 Notice).
[52] Public Comments– J. Huset (Dec. 6, 2023) (eDocket No. 202312-201028-01); Public Comments– D. Wambeke (December 12, 2023) (eDocket No. 202312-201144-01); Public Comments– B. Spoke Reagan (Dec. 15, 2023) (eDocket No. 202312-201254-02); Public Comments– K. Rosenow (Dec. 18, 2023) (eDocket No. 202312-201291-01); Public Comments– J. Madison et. al (December 27, 2023) (eDocket No. 202312-201566-01); Public Comments– A. Pfeifle (Jan. 8, 2024) (eDocket No. 20241-201966-01).
[53] Notice of Commission Meeting (Dec. 8, 2023) (eDocket No. 202312-201067-02).
[54] Briefing Papers (Dec. 12, 2023) (eDocket No. 202312-201149-01).
[55] Ex. EERA-2 (Public Comments– D. Swanson).
[56] Public Comments (L. and J. Pierskalla) (Dec. 27, 2023) (eDocket No. 202312-201559-01).
[57] Ex. PUC-3 (Sample Route Permit).
[58] Ex. EERA-3 (Public Comments– A. Pfeifle).

59. On January 9, 2024, the Commission and EERA issued a Notice of Public Information and EIS Scoping Meetings, requesting written comments by February 21, 2024.[59]

60. On January 16, 2024, the Commission filed the Order accepting the RP Application as Complete.[60]

61. On January 16, 2024, Jason and Laura Pierskalla filed a comment on the Project.[61]

62. On January 17, 2024, the Commission filed documentation confirming that it had provided the Notice of Public Information and EIS Scoping Meetings for the Project to the *EQB Monitor*.[62]

63. Also on January 17, 2024, the Commission filed a public comment regarding the Project that was received outside of the comment period on the Project.[63]

64. From January 17, 2024, to February 26, 2024, the Commission filed 39 public comments it received during the EIS Scoping comment period.[64]

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[59] Ex. PUC-4 (Notice of Public Information and EIS Scoping Meetings).
[60] Ex. PUC-5 (Order accepting RP Application as Complete).
[61] Pierskalla Comments (Jan. 16, 2024) (eDocket Nos. 20241-202197-01, 20241-202198-01, 20241-202198-02, and 20241-202198-03).
[62] *EQB Monitor* – Notice of Public Information Meetings (Jan. 17, 2024) (eDocket No. 20241-202254-02).
[63] Public Comments (M. Hommerding) (Jan. 17, 2024) (eDocket No. 20241-202267-01).
[64] Public Comments (Harrison Township) (Jan. 17, 2024) (eDocket No. 20241-202253-01); Public Comments (C. Storkamp) (Jan. 19, 2024) (eDocket No. 20241-202366-02); Public Comments (A. Simon) (Jan. 22, 2024) (eDocket No. 20241-202423-01); Public Comments (T. and N. Mertens) (Feb. 7, 2024) (eDocket No. 20242-203134-01); Public Comments (D. Ringgenberg) (Feb. 13, 2024) (eDocket No. 20242-203375-01); Public Comments (C. Kieper) (Feb. 13, 2024) (eDocket No. 20242-203370-01); Public Comments (P. Schlangen) (Feb. 13, 2024) (eDocket No. 20242-203355-01); Public Comments (R. and D. Schabel) (Feb. 13, 2024) (eDocket No. 20242-203346-01); Public Comments (R. Coughlin) (Feb. 14, 2024) (eDocket No. 20242-203391-01); Public Comments (H. Graham) (Feb. 14, 2024) (eDocket No. 20242-203390-02); Public Comments (M. Chase) (Feb. 16, 2024) (eDocket No. 20242-203543-01); Public Comments (T. McCall) (Feb. 16, 2024) (eDocket No. 20242-203539-01); Public Comments (W. Schaar) (Feb. 16, 2024) (eDocket No. 20242-203537-01); Public Comments (G. Lamon) (Feb. 16, 2024) (eDocket Nos. 20242-203519-01 and 20242-203518-01); Public Comments (N. and K. Pilgram) (Feb. 16, 2024) (eDocket No. 20242-203513-01); Public Comments (C. and N. Hoekstra) (Feb. 16, 2024) (eDocket No. 20242-203503-02); Public Comments (D. Schabel) (Feb. 20, 2024) (eDocket Nos. 20242-203593-02 and 20242-203575-01); Public Comments (T. and T. Libbesmeier) (Feb. 20, 2024) (eDocket No. 20242-203592-01); Public Comments (D. Wambeke) (Feb. 20, 2024) (eDocket No. 20242-203577-01); Public Comments (R. Schabel) (Feb. 20, 2024) (eDocket No. 20242-203576-01); Public Comments (R. and D. Schabel) (Feb. 20, 2024) (eDocket No. 20242-203574-02); Public Comments (B. Nelson) (Feb. 21, 2024) (eDocket No. 20242-203693-03); Public Comments (B. Hicks) (Feb. 21, 2024) (eDocket No. 20242-203693-01); Public Comments (M. and S. Cabrera) (Feb. 21, 2024) (eDocket Nos. 20242-203670-02 and 20242-203668-02); Public Comments (G. TerWisscha) (Feb. 21, 2024) (eDocket No. 20242-203667-03); Public Comments (T. Hook) (Feb. 21, 2024) (eDocket No. 20242-203667-01); Public Comments (J. Junkermeier) (Feb. 21, 2024) (eDocket No. 20242-203643-01); Public Comments (J. Zeug) (Feb. 21, 2024) (eDocket No. 20242-203641-10); Public Comments (M. Hicks) (Feb. 21, 2024) (eDocket No. 20242-203641-08); Public

65. On January 24, 2024, Carol Overland filed a comment.[65]

66. On January 24, 2024, the Commission filed the Notice of and Order for Hearing. The Commission requested that the Administrative Law Judge "prepare a report setting forth findings of fact, conclusions of law, and a recommendation on the merits of the proposed project, as well as on permit conditions, considering the applicable statutory and rule criteria."[66]

67. On January 24, 25, 30, and 31, 2024, the Commission held in-person public information and EIS scoping meetings on the Applications in the cities of Granite Falls, Marshall, Olivia, Redwood Falls, Litchfield, Monticello, and Kimball, Minnesota. A virtual public information and EIS scoping meeting on the Applications was held on February 1, 2024, via WebEx.[67]

68. On January 30, 2024, the Commission filed the public meeting handouts.[68]

69. On February 1, 2024, the Commission filed documentation confirming that it had provided Notice of Public Information and EIS Scoping Meetings for the Project in the Becker Patriot News newspaper in Becker, Minnesota.[69]

70. On February 6, 2024, the Commission filed a public comment it received.[70]

71. On February 12, 2024, the Office of Administrative Hearings (OAH) filed a letter reassigning the Project to Judge Suzanne Todnem.[71]

72. On February 14, 2024, OAH filed the notice of prehearing conference.[72]

73. On February 16, 2024, Kevin and Erin Donnay, and Jason Pierskalla filed comments.[73]

Comments (J. Miller) (Feb. 21, 2024) (eDocket No. 20242-203641-06); Public Comments (D. Anderson [Kandiyohi County Commissioner]) (Feb. 21, 2024) (eDocket No. 20242-203641-04); Public Comments (L. Newberger) (Feb. 21, 2024) (eDocket No. 20242-203641-02); Public Comments (R. Nelson) (Feb. 22, 2024) (eDocket No. 20242-203730-02); Public Comments (L. Meyer) (Feb. 22, 2024) (eDocket No. 20242-203729-01); Public Comments (A. Pfeifle) (Feb. 23, 2024) (eDocket No. 20242-203767-01); and Public Comments (M. Hicks) (Feb. 26, 2024) (eDocket No. 20242-203816-02).

[65] Overland Comments (Jan. 24, 2024) (eDocket No. 20241-202580-02, 20241-202580-04).

[66] Ex. PUC-7 (Notice of and Order for Hearing).

[67] Notice of Public Information and Environmental Impact Statement Scoping Meetings (January 9, 2024) (eDocket No. 20241-202004-02).

[68] Public Meeting Handouts (Jan. 30, 2023) (eDocket No. 20241-202848-01).

[69] Ex. PUC -8 (Affidavit of Publication – Newspaper Notice – Public Information Meetings).

[70] Public Comments (T. Mertens) (Feb. 6, 2024) (eDocket No. 20242-203134-01).

[71] Reassignment Letter (Feb. 12, 2024) (eDocket No. 20242-203320-01).

[72] Notice of Prehearing Conference (Feb. 14, 2024) (eDocket No. 20242-203427-01).

[73] Pierskalla Comments (Feb. 16, 2024) (eDocket No. 20242-203517-03); Comments (Feb. 16, 2024) (eDocket No. 20242-203501-01).

74. On February 20, 2024, Clean Energy Economy Minnesota, IUOE Local 49, NCSRCC and the Citizens Utility Board of Minnesota filed comments.[74]

75. On February 21, 2024, comments were received from the following: LIUNA; Minnesota Department of Natural Resources (MDNR); NoCapX 2020; Fresh Energy; Clean Grid Alliance; Minnesota Department of Transportation (MnDOT); and the Center of the American Experiment.[75]

76. On February 28, 2024, the Wright County Board of Commissioners filed a comment.[76]

77. On March 8, 2024, OAH filed an Amended Notice of Prehearing Conference.[77]

78. On March 12, 2024, the Commission filed a public comment from Lyon County.[78]

79. On March 18, 2024, Xcel Energy submitted reply comments in response to the public comments filed during the EIS Scoping comment period.[79]

80. On March 20, 2024, EERA filed several batches of public comments submitted during the EIS Scoping comment period.[80]

81. Also on March 20, 2024, the Commission filed a public comment from the Lower Sioux Indian Community.[81]

82. On March 26, 2024, and April 9, 2024, the Commission filed public comments received outside of the EIS Scoping comment period.[82]

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[74] IUOE Local 49 and NCSRCC Comments (Feb. 20, 2024) (eDocket No. 20242-203599-01); Comments (Feb. 20, 2024) (eDocket No. 20242-203586); Citizens Utility Board of Minnesota Comments (Feb. 20, 2024) (eDocket Nos. 20242-203569-02 and 20242-203569-04).
[75] LIUNA Comments (Feb. 21, 2024) (eDocket No. 20242-2037702-02); MDNR Comments (Feb. 21, 2024) (eDocket Nos. 202425-203694-01, 202425-203694-02 and 202425-203694-03); NoCapX 2020 Comments (Feb. 21, 2024) (eDocket No. 20242-203692-02); Fresh Energy Comments (Feb. 21, 2024) (eDocket No. 20242-203691-01); Clean Grid Alliance Comments (Feb. 21, 2024) (eDocket No. 20242-203680-01); MnDOT Comments (Feb. 21, 2024) (eDocket No. 20242-203676-02); Center for the American Experiment Comments (Feb. 21, 2024) (eDocket No. 20242-203647-01).
[76] Wright County Comments (Feb. 28, 2024) (eDocket No. 20242-203898-01).
[77] Amended Notice of Prehearing Conference (Mar. 8, 2024) (eDocket No. 20243-204173-01).
[78] Public Comments (Lyon County) (Mar. 12, 2024) (eDocket No. 20243-204255-02).
[79] Ex. Xcel-14 (Reply Comments).
[80] Ex. EERA-4 (Public Scoping Comments).
[81] Public Comments (Lower Sioux Indian Community) (Mar. 20, 2024) (eDocket No. 20243-204502-01).
[82] Public Comments (R. Schabel) (Mar. 26, 2024) (eDocket No. 20243-204665-02); Public Comments (B. Reagan) (Apr. 9, 2024) (eDocket No. 20243-205146-01).

83. On March 28 and 29, 2024, EERA filed public comments received outside of the EIS Scoping comment period.[83]

84. On April 17, 2024, the Office of the Attorney General filed the Minnesota Department of Commerce's proposed procedural schedule for the Project.[84]

85. On April 17, 2024, NoCapX 2020 filed comments regarding the procedural schedule.[85]

86. On April 17, 2024, EERA filed a scoping summary and recommendations regarding the EIS scoping process.[86]

87. On April 17, 2024, Commission staff filed its proposed procedural schedule.[87]

88. On April 17, 2024, the Commission filed a public comment received outside of the EIS Scoping comment period regarding the Project.[88]

89. On April 17, 2024, DER filed supplemental comments recommending that the Commission determine the CN Application to be substantially complete.[89]

90. On April 19, 2024, the Commission filed the Notice of Commission Meeting set for May 2, 2024. Briefing Papers for that meeting were filed on April 24, 2024.[90]

91. On April 23, 2024, Xcel Energy filed reply comments in response to EERA's scoping recommendations.[91]

92. On April 30, 2024, NoCapX 2020 filed a Notice of Appearance.[92]

93. On May 1, 2024, Administrative Law Judge Todnem convened a prehearing conference.[93]

94. On May 1, 2024, NoCapX 2020 filed comments regarding the procedural schedule.[94]

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[83] Exs. EERA-5 and EERA-6 (Public Comments).
[84] Department of Commerce's Proposed Schedule (Apr. 17, 2024) (eDocket No. 20244-205542-02).
[85] NoCapX 2020 Comments (Apr. 17, 2024) (eDocket No. 20244-205580-01).
[86] Ex. EERA-7 (Scoping Summary and Recommendation).
[87] Commission's Proposed Schedule (Apr. 17, 2024) (eDocket No. 20244-205512-02).
[88] Public Comments (J. and R. Junkermeier) (Apr. 17, 2024) (eDocket No. 20244-205494-01).
[89] DER Supplemental Comments (April 17, 2023) (eDocket No. 20234-194831-01).
[90] Notice of Commission Meeting (Apr. 19, 2024) (eDocket No. 20244-205673-03); Commission Meeting Briefing Papers (Apr. 24, 2024) (eDocket No. 20244-205944-02).
[91] Ex. Xcel-15 (Reply Comments).
[92] NoCapX 2020 Notice of Appearance (Apr. 30, 2024) (eDocket No. 20244-206209-01).
[93] Amended Notice of Prehearing Conference (Mar. 8, 2024) (eDocket No. 20243-204173-01); *see* Prehearing Conference Transcripts (May 1, 2024) (eDocket No. 20251-214335-01).
[94] NoCapX 2020 Comments (May 1, 2024) (eDocket No. 20245-206256-02).

95. On May 3, 2024, Commission staff filed a revised proposed procedural schedule.[95]

96. On May 9, 2024, OAH filed an Order for Second Prehearing Conference.[96]

97. On May 9, 2024, the Commission issued an order adopting the system alternatives and route alternatives recommended by EERA for inclusion in the EIS.[97]

98. On May 14, 2024, EERA filed the EIS scoping decision and notice of the scoping decision for the Project.[98]

99. On May 21, 2024, OAH issued the Scheduling Order.[99]

100. On May 29, 2024, EERA filed documentation confirming that it had provided the Notice of EIS Scoping Decision Availability to the *EQB Monitor*.[100]

101. On June 5, 2024, the Commission filed the Notice of Comment Period on the Merits of the CN Application.[101]

102. On June 6, 2024, Jason and Lori Pierskalla filed a comment.[102]

103. On June 10, 2024, EERA filed documentation confirming that it had served the Notice of EIS Scoping Decision upon the required parties.[103]

104. On June 26, 2024, the Commission filed the minutes from the May 2, 2024, Commission Meeting.[104]

105. On June 26, 2024, Shaddix & Associates filed the transcript of the May 17, 2024, Prehearing Conference.[105]

106. From June 28, 2024, to September 11, 2024, the Commission filed nine public comments received on the Project.[106]

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[95] Revised Proposed Schedule (May 63, 2024) (eDocket No. 20245-206389-02).
[96] Order for Second Prehearing Conference (May 9, 2024) (eDocket No. 20245-206555-01).
[97] Ex. PUC-9 (Order on Scope of the EIS).
[98] Ex. EERA-9 (EIS Scoping Decision); Ex. EERA-8 (Notice of EIS Scoping Decision).
[99] Scheduling Order (May 21, 2024) (eDocket No. 20245-206962-01).
[100] Ex. EERA-10 (*EQB Monitor* Notice).
[101] Notice of Comment Period (June 5, 2024) (eDocket No. 20246-207421-01).
[102] Pierskalla Comments (June 6, 2024) (eDocket No. 20246-207473-01).
[103] Ex. EERA-11 (Affidavit of Service for EIS Scoping Notice).
[104] Meeting Minutes (June 26, 2024) (eDocket No. 20246-207966-06).
[105] Prehearing Conference Transcript (June 26, 2024) (eDocket No. 20246-207957-01).
[106] Public Comments (J. Junkermeier) (June 28, 2024) (eDocket No. 20246-208072-01); Public Comments (P. Pladson) (July 11, 2024) (eDocket No. 20246-208509-02); Public Comments (K. Rosenow) (Aug. 21, 2024) (eDocket No. 20248-209679-01); Public Comments (B. Rosenow) (Sept. 9, 2024) (eDocket No. 20249-210040-01); Public Comments (N. and K. Pilgram) (Sept. 9, 2024) (eDocket No. 20249-210038-01);

107. On September 6, 2024, the Applicant filed Direct Testimony and Schedules of Matthew Langan, Joseph Samuel and Jason Standing.[107]

108. DER submitted initial comments on that day. It recommended that the Commission consider the impacts detailed in the Environmental Report, and, if the impacts are acceptable to it, approve the Certificate of Need.[108]

109. Also on September 6, 2024, comments were filed by: Xcel Energy, LIUNA, NoCapX 2020, Citizen's Utility Board, Fresh Energy, Minnesota Center for Environmental Advocacy, Center for Rural Affairs, and the Clean Grid Alliance (collectively, the Joint Commenters), Clean Energy Economy MN, and DER.[109]

110. On September 17, 2024, the OAH filed an Order Adopting Public Hearing Schedule.[110]

111. On September 19, 2024, the OAH filed an Amended Order Adopting Public Hearing Schedule.[111]

112. On September 19, 2024, the Commission filed a letter authorizing Xcel Energy to consult with the State Historic Preservation Office (SHPO) for the Project.[112]

113. On October 8, 2024, EERA filed its Draft Environmental Impact Statement (DEIS). On the same day, DER submitted reply comments. As with its initial comments, DER urged the Commission to consider the impacts detailed in the Environmental Report, and, if the impacts are acceptable to it, approve the Certificate of Need.[113]

114. On October 15, 2024, the Commission filed a Notice of Informational Meetings, Public and Evidentiary Hearings, and Availability of DEIS. It also filed documentation confirming that it had provided the Notice of Informational Meetings, Public and Evidentiary Hearings, and Availability of DEIS to the *EQB Monitor*.[114]

Public Comments (A. Donnay) (Sept. 9, 2024) (eDocket No. 20249-210034-01); Public Comments (L. Dallenbach) (Sept. 10, 2024) (eDocket No. 20249-210102-01); Public Comments (K. and E. Donnay) (Sept. 11, 2024) (eDocket Nos. 20249-210130-01 and 20249-210106-02).

[107] Ex. Xcel-16 (Langan Direct); Ex. Xcel-17 (Direct Testimony of Joseph Samuel [Samuel Direct]); Ex. Xcel-18 (Direct Testimony of Jason Standing [Standing Direct]).

[108] DER Comments (Sept. 6, 2024) (eDocket No. 20249-210008-01).

[109] Applicant's Comments on CN Application (Sept. 6, 2024) (eDocket No. 20249-210022-02); LIUNA Comments (Sept. 6, 2024) (eDocket No. 20249-210030-01); NoCapX 2020 Comments (Sept. 6, 2024) (eDocket No. 20249-210023-01); Joint Commenters Comments (Sept. 6, 2024) (eDocket No. 20249-210016-02); Clean Energy Economy MN Comments (Sept. 6, 2024) (eDocket No. 20249-210009-01); DER Comments (Sept. 6, 2024) (eDocket No. 20249-210008-01).

[110] Order Adopting Public Hearing Schedule (Sept. 17, 2024) (eDocket No. 20249-210280-01).

[111] Amended Order Adopting Public Hearing Schedule (Sept. 17, 2024) (eDocket No. 20249-210361-01).

[112] Ex. PUC-10 (SHPO Authorization).

[113] Ex. EERA-12 (DEIS); DER Comments (Oct. 8, 2024) (eDocket No. 20249-210008-01).

[114] Ex. PUC-11 (Notice of Informational Meetings, Public and Evidentiary Hearings, and Availability of DEIS); Ex. PUC-12 (*EQB Monitor* Verification).

115. From October 21, 2024, to November 26, 2024, the Commission filed 39 public comments it received during the DEIS comment period.[115]

[115] Public Comments (B. Norgaard) (Oct. 21, 2024) (eDocket No. 202410-211141-01); Public Comments (J. Pierskalla) (Oct. 21, 2024) (eDocket No. 202410-211137-01); Public Comments (K. Grossinger) (Oct. 22, 2024) (eDocket No. 202410-211236-02); Public Comments (J. Jacobs) (Oct. 22, 2024) (eDocket No. 202410-211235-01); Public Comments (G. Carlson) (Oct. 28, 2024) (eDocket No. 202410-211374-01); Public Comments (M. Bos) (Oct. 29, 2024) (eDocket No. 202410-211414-01); Public Comments (M. Foster) (Oct. 29, 2024) (eDocket No. 202410-211413-02); Public Comments (K. and J. Powell) (Oct. 30, 2024) (eDocket No. 202410-211439-02); Public Comments (J. Pierskalla) (Oct. 31, 2024) (eDocket No. 202410-211476-02); Public Comments (B. Fox) (Oct. 31, 2024) (eDocket No. 202410-211475-01); Public Comments (Batch 26) (Nov. 1, 2024) (eDocket No. 202410-211532-02); Public Comments (Batch 1) (Nov 4, 2024) (eDocket No. 202410-211578-02); Public Comments (Batch) (Nov 4, 2024) (eDocket No. 202411-211573-01); Public Comments (B. & P. Pladson) (Nov 4, 2024) (eDocket No. 202411-211571-02); Public Comments (B. Karg) (Nov 4, 2024) (eDocket No. 202411-211570-02); Public Comments (Batch 1) (Nov. 5, 2024) (eDocket No. 202411-211610-01); Public Comments (D. Schabel) (Nov 7, 2024) (eDocket No. 202411-211709-04); Public Comments (Batch 1) (Nov 7, 2024) (eDocket No. 202411-211709-02); Public Comments (J. Volstad) (Nov 7, 2024) (eDocket No. 202411-211696-01); Public Comments (B. Hilbert) (Nov 7, 2024) (eDocket No. 202411-211695-01); Public Comments (M. and A. Foster) (Nov 7, 2024) (eDocket No. 202411-211693-01); Public Comments (K. Suggs) (Nov 8, 2024) (eDocket No. 202411-211732-06); Public Comments (M. Poulin) (Nov 8, 2024) (eDocket No. 202411-211732-04); Public Comments (R. and D. Schabel) (Nov 8, 2024) (eDocket No. 202411-211732-02); Public Comments (M. Neubauer) (Nov 12, 2024) (eDocket No. 202411-211829-02); Public Comments (Batch 1) (Nov 12, 2024) (eDocket No. 202411-211805-01); Public Comments (G. Stage) (Nov 13, 2024) (eDocket No. 202411-211881-01); Public Comments (G. and B. Schmidt) (Nov 13, 2024) (eDocket No. 202411-211875-02); Public Comments (K. Klaverkamp) (Nov 13, 2024) (eDocket No. 202411-211874-01); Public Comments (G. Stage) (Nov 13, 2024) (eDocket No. 202411-211873-01); Public Comments (D. Macik) (Nov 13, 2024) (eDocket No. 202411-211872-02); Public Comments (D. and R. Klaverkamp) (Nov 13, 2024) (eDocket No. 202411-211871-01); Public Comments (D. and D. Buysse) (Nov 14, 2024) (eDocket No. 202411-211932-02); Public Comments (P. Markwardt) (Nov 14, 2024) (eDocket No. 202411-211931-01); Public Comments (T. Hilsgen) (Nov 15, 2024) (eDocket No. 202411-212013-10); Public Comments (S. Woolcott) (Nov 15, 2024) (eDocket No. 202411-212013-08); Public Comments (S. Gerdes) (Nov 15, 2024) (eDocket No. 202411-212013-06); Public Comments (R. Huberty) (Nov 15, 2024) (eDocket No. 202411-212013-04); Public Comments (M. Huberty) (Nov 15, 2024) (eDocket No. 202411-212013-02); Public Comments (J. Lavoy) (Nov 15, 2024) (eDocket No. 202411-212011-07); Public Comments (E. Donnay) (Nov 15, 2024) (eDocket No. 202411-212011-05); Public Comments (D. Donnay) (Nov 15, 2024) (eDocket No. 202411-212011-03); Public Comments (B. Taatjes) (Nov 15, 2024) (eDocket No. 202411-212011-01); Public Comments (D. Lux) (Nov. 15, 2024) (eDocket No. 202411-211989-01); Public Comments (Batch) (Nov. 18, 2024) (eDocket No. 202411-212085-01); Public Comments (Batch 1) (Nov. 19, 2024) (eDocket No. 202411-212120-01); Public Comments (Melville Township Board) (Nov. 19, 2024) (eDocket No. 202411-212114-01); Public Comments (Batch 1) (Nov. 20, 2024) (eDocket No. 202411-212196-01); Public Comments (Batch 7) (Nov. 21, 2024) (eDocket No. 202411-212262-08); Public Comments (Batch 6) (Nov. 21, 2024) (eDocket No. 202411-212262-07); Public Comments (W. Donnay) (Nov. 21, 2024) (eDocket No. 202411-212262-06); Public Comments (Batch 5) (Nov. 21, 2024) (eDocket No. 202411-212262-05); Public Comments (Batch 4) (Nov. 21, 2024) (eDocket No. 202411-212262-04); Public Comments (Batch 3) (Nov. 21, 2024) (eDocket No. 202411-212262-03); Public Comments (Batch 2) (Nov. 21, 2024) (eDocket No. 202411-212262-02); Public Comments (Batch 1) (Nov. 21, 2024) (eDocket No. 202411-212262-01); Public Comments (T. and N. Mertens) (Nov. 21, 2024) (eDocket No. 202411-212260-01); Public Comments (Maine Prairie Township Board of Supervisors) (Nov. 21, 2024) (eDocket No. 202411-212245-01); Public Comments (Batch 1) (Nov. 21, 2024) (eDocket No. 202411-212231-01); Public Comments (W. Schwandt) (Nov. 22, 2024) (eDocket No. 202411-212328-05); Public Comments (M. McCarney) (Nov. 22, 2024) (eDocket No. 202411-212328-04); Public Comments (A. and T. Teicher)

116. On October 22, 2024, EERA filed documentation confirming that it had served the DEIS on the required parties.[116]

117. On October 22, 2024, Applicant filed Surrebuttal Testimony and Schedules of Matthew Langan and Joseph Samuel.[117]

118. On October 28, 2024, Applicant filed the Combined Exhibit List ahead of the public hearings.[118]

119. On October 28, 2024, Jason and Laura Pierskalla filed a comment regarding the Project.[119]

120. On October 29 and 30, 2024, and November 6 and 7, 2024, the Administrative Law Judge presided over seven in-person public hearings and one virtual public hearing.[120]

121. On November 1, 2024, Minnesota Land & Liberty Coalition filed a comment.[121]

122. On November 4, 2024, Jason and Laura Pierskalla filed comments.[122]

(Nov. 22, 2024) (eDocket No. 202411-212328-03); Public Comments (T. Mitchell and C. Fitzgerald) (Nov. 22, 2024) (eDocket No. 202411-212328-02); Public Comments (B. Greenslit) (Nov. 22, 2024) (eDocket No. 202411-212328-01); Public Comments (Clearwater Township Board) (Nov. 25, 2024) (eDocket No. 202411-212392-01); Public Comments (C. Snobl) (Nov. 25, 2024) (eDocket No. 202411-212390-01); Public Comments (Batch 4) (Nov. 25, 2024) (eDocket No. 202411-212380-04); Public Comments (Batch 3) (Nov. 25, 2024) (eDocket No. 202411-212380-03); Public Comments (Batch 2) (Nov. 25, 2024) (eDocket No. 202411-212380-02); Public Comments (Batch 1) (Nov. 25, 2024) (eDocket No. 202411-212380-01); Public Comments (Center for Rural Affairs) (Nov. 25, 2024) (eDocket No. 202411-212375-01); Public Comments (Center for Rural Affairs) (Nov. 25, 2024) (eDocket No. 202411-212368-01); Public Comments (Batch 8) (Nov. 25, 2024) (eDocket No. 202411-212357-01); Public Comments (L. Winter) (Nov. 26, 2024) (eDocket No. 202411-212466-01); Public Comments (Batch 8) (Nov. 26, 2024) (eDocket No. 202411-212462-04); Public Comments (Batch 7) (Nov. 26, 2024) (eDocket No. 202411-212462-03); Public Comments (Batch 6) (Nov. 26, 2024) (eDocket No. 202411-212462-02); Public Comments (Batch 5) (Nov. 26, 2024) (eDocket No. 202411-212462-01); Public Comments (B. Theisen) (Nov. 26, 2024) (eDocket No. 202411-212461-01); Public Comments (B. and L. Bessingpas) (Nov. 26, 2024) (eDocket No. 202411-212457-01); Public Comments (L. Newberger) (Nov. 26, 2024) (eDocket No. 202411-212429-01).

[116] Ex. EERA-13 (Certificate of Service for DEIS).

[117] Ex. Xcel-19 (Surrebuttal Testimony of Matthew Langan (Langan Surrebuttal)); Ex. Xcel-20 (Surrebuttal Testimony of Joseph Samuel (Samuel Surrebuttal)).

[118] Combined Exhibit List (Oct. 28, 2024) (eDocket No. 202410-211371-01).

[119] Pierskalla Comments (Oct. 28, 2024) (eDocket No. 202410-211355-01).

[120] *See* eDocket Nos. 202412-213076-01; 202412-213076-01; 202412-213076-02; 202412-213076-02; 202412-213076-03; 202412-213076-03; 202412-213076-04; 202412-213076-04; 202412-213076-05; 202412-213076-05; 202412-213076-06; 202412-213076-06; 202412-213076-07; 202412-213076-07; 202412-213076-08; 202412-213076-08 (Public Hearing Transcripts).

[121] Minnesota Land & Liberty Coalition Comments (Nov. 1, 2024) (eDocket No. 202411-211548-02).

[122] Pierskalla Comments (Nov. 4, 2024) (eDocket Nos. 202411-211574-01, 202411-211574-02, 202411-211574-03, 202411-211575-01, 202411-211575-02, 202411-211575-03, 202411-211575-04, 202411-

123. On November 5, 2024, EERA filed documentation confirming that it had provided a copy of the DEIS to the Kimball Public Library.[123]

124. On November 25, 2024, comments were submitted by: LIUNA; Jeffrey Magedanz; Sarah Kern Magedanz; Jensen Group Objectors (filed a Petition in Opposition to the Project and 61 public comments); Xcel Energy; John Barka; MnDOT; Shannon Cabrera; Miguel Cabrera; and Jeremy Vinar.[124]

211575-05, 202411-211575-06, 202411-211575-07, 202411-211575-08, 202411-211576-01, 202411-211576-02, 202411-211576-03, 202411-211576-04, 202411-211576-05, 202411-211576-06).

[123] Certificate of Service (Nov. 5, 2024) (eDocket No. 202411-211613-01).

[124] LIUNA Comments (Nov. 25, 2024) (eDocket No. 202411-212408-01); Magedanz Comments (Nov. 25, 2024) (eDocket No. 202411-212401-01); Magedanz Comments (Nov. 25, 2024) (eDocket No. 202411-212400-01); Petition in Opposition to MNEC Project and Utility Route (Nov. 25, 2024) (eDocket No. 202411-212334-03); Public Comments (R. Dobberstein) (Nov. 25, 2024) (eDocket No. 202411-212334-01); Public Comments (Q. Berres) (Nov. 25, 2024) (eDocket No. 202411-212334-02); Public Comments (P. Jensen) (Nov. 25, 2024) (eDocket No. 202411-212334-04); Public Comments (P. Berres) (Nov. 25, 2024) (eDocket No. 202411-212334-05); Public Comments (M. Reberg) (Nov. 25, 2024) (eDocket No. 202411-212334-06); Public Comments (M. Reberg) (Nov. 25, 2024) (eDocket No. 202411-212334-07); Public Comments (L. Lichte) (Nov. 25, 2024) (eDocket No. 202411-212334-08); Public Comments (M. Reberg) (Nov. 25, 2024) (eDocket No. 202411-212334-09); Public Comments (L. Lichte) (Nov. 25, 2024) (eDocket No. 202411-212334-10); Public Comments (W. Hentges) (Nov. 25, 2024) (eDocket No. 202411-212334-11); Public Comments (W. Pramann) (Nov. 25, 2024) (eDocket No. 202411-212334-12); Public Comments (W. Pramann) (Nov. 25, 2024) (eDocket No. 202411-212334-13); Public Comments (T. Spaulding) (Nov. 25, 2024) (eDocket No. 202411-212334-14); Public Comments (S. O'Brien) (Nov. 25, 2024) (eDocket No. 202411-212334-15); Public Comments (S. Rosenow) (Nov. 25, 2024) (eDocket No. 202411-212334-16); Public Comments (S. Cremers) (Nov. 25, 2024) (eDocket No. 202411-212334-17); Public Comments (S. Cremers) (Nov. 25, 2024) (eDocket No. 202411-212334-18); Public Comments (J. Vinar) (Nov. 25, 2024) (eDocket No. 202411-212337-01); Public Comments (J. Hentges) (Nov. 25, 2024) (eDocket No. 202411-212337-02); Public Comments (J. Reberg) (Nov. 25, 2024) (eDocket No. 202411-212337-03); Public Comments (J. Reberg) (Nov. 25, 2024) (eDocket No. 202411-212338-01); Public Comments (K. Wills) (Nov. 25, 2024) (eDocket No. 202411-212338-02); Public Comments (K. Asfeld) (Nov. 25, 2024) (eDocket No. 202411-212338-03); Public Comments (K. Asfeld) (Nov. 25, 2024) (eDocket No. 202411-212338-04); Public Comments (K. Gehrke (Nov. 25, 2024) (eDocket No. 202411-212339-01); Public Comments (K. Kummet) (Nov. 25, 2024) (eDocket No. 202411-212339-02); Public Comments (K. O'Brien) (Nov. 25, 2024) (eDocket No. 202411-212339-03); Public Comments (K. Schmidt) (Nov. 25, 2024) (eDocket No. 202411-212339-04); Public Comments (D. Ingebrigtson) (Nov. 25, 2024) (eDocket No. 202411-212339-05); Public Comments (K. O'Brien) (Nov. 25, 2024) (eDocket No. 202411-212340-01); Public Comments (D. Binsfeld) (Nov. 25, 2024) (eDocket No. 202411-212340-02); Public Comments (E. Gehrke) (Nov. 25, 2024) (eDocket No. 202411-212340-03); Public Comments (D. Medeck) (Nov. 25, 2024) (eDocket No. 202411-212340-04); Public Comments (E. Helgeson) (Nov. 25, 2024) (eDocket No. 202411-212340-05); Public Comments (G. Bloom) (Nov. 25, 2024) (eDocket No. 202411-212340-06); Public Comments (J. Schabel) (Nov. 25, 2024) (eDocket No. 202411-212340-07); Public Comments (J. Spaulding) (Nov. 25, 2024) (eDocket No. 202411-212341-01); Public Comments (J. Helgeson) (Nov. 25, 2024) (eDocket No. 202411-212341-02); Public Comments (J. Freedland) (Nov. 25, 2024) (eDocket No. 202411-212341-03); Public Comments (J. Christensen) (Nov. 25, 2024) (eDocket No. 202411-212341-04); Public Comments (P. & C. Jensen) (Nov. 25, 2024) (eDocket No. 202411-212341-05); Public Comments (B. Gehrke) (Nov. 25, 2024) (eDocket No. 202411-212342-01); Public Comments (C. Mondloch) (Nov. 25, 2024) (eDocket No. 202411-212342-02); Public Comments (C. Jensen) (Nov. 25, 2024) (eDocket No. 202411-212342-03); Public Comments (D. Tschida (Nov. 25, 2024) (eDocket No. 202411-212342-04); Public Comments (D. Lichte) (Nov. 25, 2024) (eDocket No. 202411-212342-05); Public Comments (D. Binsfeld) (Nov. 25, 2024) (eDocket No. 202411-212342-06); Public Comments (D. Mondloch) (Nov. 25, 2024)

125. On November 26, 2024, Jennifer Barka filed a public comment regarding the Project.[125]

126. On November 26, 2024, MDNR filed public comments regarding the Project.[126]

127. On December 2 and 3, 2024, the Commission filed comments it received outside of the DEIS comment period.[127]

128. On December 3, 2024, EERA filed a comment it received outside of the DEIS comment period.[128]

129. On December 4, 2024, the Commission filed public comments it received.[129]

130. On December 6, 2024, Applicant filed documentation evidencing transmittal of the public hearing transcripts to local libraries.[130]

131. On December 10, 2024, the Commission filed additional public comments it received outside the DEIS comment period.[131]

(eDocket No. 202411-212343-01); Public Comments (D. Schabel) (Nov. 25, 2024) (eDocket No. 202411-212343-02); Public Comments (Ingebrigtson Family) (Nov. 25, 2024) (eDocket No. 202411-212343-03); Public Comments (A. Rain) (Nov. 25, 2024) (eDocket No. 202411-212343-04); Public Comments (A. Simon) (Nov. 25, 2024) (eDocket No. 202411-212343-05); Public Comments (A. Geissler) (Nov. 25, 2024) (eDocket No. 202411-212343-06); Public Comments (B. Schabel) (Nov. 25, 2024) (eDocket No. 202411-212344-01); Public Comments (B. Brinkman) (Nov. 25, 2024) (eDocket No. 202411-212344-02); Public Comments (B. Jensen) (Nov. 25, 2024) (eDocket No. 202411-212344-03); Public Comments (B. Simon) (Nov. 25, 2024) (eDocket No. 202411-212344-04); Public Comments (B. Vossen) (Nov. 25, 2024) (eDocket No. 202411-212344-05); Public Comments (B. Gehrke) (Nov. 25, 2024) (eDocket No. 202411-212344-06); Public Comments (G. Bloom) (Nov. 25, 2024) (eDocket No. 202411-212393-02); Public Comments (B. Gehrke) (Nov. 25, 2024) (eDocket No. 202411-212393-01); Xcel Energy DEIS Comments (Nov. 25, 2024) (eDocket No. 202411-212383-01); Barka Comments (Nov. 25, 2024) (eDocket No. 202411-212362-01); MnDOT Comments (Nov. 25, 2024) (eDocket No. 202411-212360-01); Cabrera Comments (Nov. 25, 2024) (eDocket No. 202411-212349-01); Cabrera Comments (Nov. 25, 2024) (eDocket No. 202411-212348-01); Vinar Comments (Nov. 25, 2024) (eDocket No. 202411-212335-01).

[125] Barka Comments (Nov. 26, 2024) (eDocket No. 202411-212411-01).

[126] MDNR Comments (Nov. 26, 2024) (eDocket Nos. 202411-212410-01, 202411-212410-02, 202411-212410-03).

[127] Public Comments (Batch 1) (Dec. 2, 2024) (eDocket No. 202412-212551-01); Public Comments (D. Bohlsen) (Dec. 2, 2024) (eDocket No. 202412-212545-02); Public Comments (L. Linz) (Dec. 2, 2024) (eDocket No. 202412-212545-01); Public Comments (L. Knoblauch) (Dec. 3, 2024) (eDocket No. 202412-212619-01); Public Comments (B. Nelson) (Dec. 3, 2024) (eDocket No. 202412-212618-01).

[128] Public Comments (B. Nelson) (Dec. 3, 2024) (eDocket No. 202412-212608-01).

[129] Public Comments (G. Stage) (Dec. 4, 2024) (eDocket Nos. 202412-212689-01 and 202412-212685-01).

[130] Xcel Energy's Letter to Local Libraries (Dec. 6, 2024) (eDocket No. 202412-212792-01).

[131] Public Comments (D. Kemper) (Dec. 10, 2024) (eDocket No. 202412-2120843-01).

132. On December 13, 2024, the Applicant filed its Response to Hearing Comments, with proposed revisions to the Draft Route Permit; Proposed Findings of Fact, Conclusions of Law, and Recommendations; and Post-Hearing Brief.[132]

133. On December 17, 2024, Shaddix & Associates filed the transcripts of the Public Hearings held between October 29, 2024 and November 7, 2024, and Public Hearing Exhibits 1-13.[133]

134. On December 18, 2024, NoCapX and Legalectric filed comments on the Project.[134]

135. On December 23, 2024, EERA file a letter regarding its review of Xcel Energy's Post-Hearing Brief and Proposed Findings of Facts, Conclusions of Law and Recommendations.[135]

136. Between January 8, 2025, and January 28, 2025, Commission Staff filed comments received outside of the comment period.[136]

137. On January 22, 2025, EERA filed the Final Environmental Impact Statement (FEIS) and Notice of EIS Availability.[137]

138. On January 29, 2025, Applicant filed its Updated Proposed Findings of Fact, Conclusions of Law, and Recommendations.[138]

139. On January 29, 2025, EERA filed Comments Concerning Applicant's Proposed Findings.[139]

III. THE PROPOSED PROJECT

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[132] Xcel Energy Response to Hearing Comments (Dec. 13, 2024) (eDocket No. 202412-212990-02); Xcel Energy Proposed Findings of Fact, Conclusions of Law, and Recommendations (Dec. 13, 2024) (eDocket No. 202412-212990-03); and Xcel Energy Post-Hearing Brief (Dec. 13, 2024) (eDocket No. 202412-212990-04).

[133] Public Hearing Exhibits 1-13 (Dec. 17, 2024) (eDocket Nos. 202412-213076-10, 202412-213076-11, 202412-213076-12, 202412-213076-13, 202412-213076-14, 202412-213076-15, 202412-213076-16, 202412-213076-17, 202412-213076-18, 202412-213076-19, 202412-213076-20, 202412-213076-21, 202412-213076-22).

[134] NoCapX and Legalectric Reply Comments (Dec. 18, 2024) (eDocket No. 202412-213183-01).

[135] EERA Letter (Dec. 23, 2024) (eDocket No. 202412-213278-01).

[136] Public Comments (Batch 1) (Jan. 8, 2025) (eDocket No. 20251-213694-01); Public Comments (Batch 2) (Jan. 10, 2025) (eDocket No. 20251-213782-01); Public Comments (Batch 3) (Jan. 13, 2025) (eDocket No. 20251-213853-01); Public Comments (Batch 4) (Jan. 14, 2025) (eDocket No. 20251-213909-01); Public Comments (Batch 5) (Jan. 16, 2025) (eDocket No. 20251-214070-01); Public Comments (Batch 6) (Jan. 27, 2025) (eDocket No. 20251-214454-01); Public Comments (J. Honer) (Jan. 28, 2025) (eDocket No. 20251-214502-01); Public Comments (Batch 7) (Jan. 28, 2025) (eDocket No. 20251-214501-01).

[137] EERA Notice of EIS Availability (Jan. 22, 2025) (eDocket No. 20251-214225-01).

[138] Xcel Energy's Updated Proposed Findings of Fact, Conclusions of Law and Recommendations (Jan. 29, 2025) (eDocket No. 20251-214598-01).

[139] EERA Comments (Jan. 29, 2025) (eDocket No. 20251-214591-01).

A. Project Summary

140. The proposed Project consists of a double circuit 345 kV transmission line and associated facilities connecting the existing Sherburne County Generation Station (Sherco) Substation in Becker, Minnesota, and a new substation proposed to be constructed near the Town of Garvin in Lyon County, Minnesota (Garvin Substation).[140]

141. Project components would include:

a. A new 3.1-mile single circuit 345 kV line between the existing Sherco Substation and the existing Sherco Solar West Substation, referred to as the Green Segment. This transmission line would be co-located as a double circuit line with the existing 345 kV line between the Sherco Substation and the Sherco Solar West Substation;

b. A double-circuit 345 kV transmission line connecting Xcel Energy's existing Sherco Solar West Substation to the new Garvin Substation. The proposed Purple and Blue Routes are approximately 171 and 174 miles long, respectively. Each route option would be combined with the Green Segment for a total end-to-end Purple/Green or Blue/Green route;

c. Modifications to the existing Sherco Substation and Sherco Solar West Substation to accommodate the new transmission lines;

d. A Voltage Support Substation that will be located approximately 80 miles along the Blue or Purple Routes south of the Sherco Solar West Substation;

e. An Intermediate Substation that will be located approximately 20 miles north of the new Garvin Substation, depending on the final route selected; and

f. The new Garvin Substation as the terminus of the Project near the Town of Garvin in Lyon County.[141]

B. Overview of Project Need

142. The Project was first identified in Xcel Energy's recently approved IRP.[142]

143. In its 2020-2034 IRP, Xcel Energy proposed a plan (Alternate Plan) to reduce carbon emissions more than 85 percent from 2005 levels by 2030 and help Xcel

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[140] Ex. Xcel-2 at 1, 4 (RP Application).
[141] *Id.* at 1, 7.
[142] CN Application at 1; *In the Matter of the 2020-2034 Upper Midwest Integrated Resource Plan of Northern States Power Company d/b/a Xcel Energy*, MPUC Docket No. E-002/RP-19-368, Order Approving Plan with Modifications and Establishing Requirements for Future Filings, at 31 (Apr. 15, 2022) (20224-184828-01) (IRP Order).

Energy deliver 100 percent carbon-free electricity by 2050. After careful consideration of Xcel Energy's proposal, along with comments and analysis from numerous stakeholders, the Commission's Order provided this summary:

> In this Order, the Commission approves a modified version of Xcel's Alternate Plan that will guide investments through 2034. With the benefit of significant stakeholder engagement spanning more than two years, the Commission is able to approve a plan largely reflecting the positions taken jointly by Xcel, many environmental groups (the CEOs), and many labor groups (the NCSRCC, IUOE, and LIUNA). The plan is designed to manage costs for households and businesses; reduce emissions that contribute to climate change; and ensure reliable electric service for Xcel customers. Most significantly, it provides for –
>
> - retiring all of Xcel's coal-powered generators,
> - adding substantial amounts of solar- and wind-powered generation,
> - reinforcing system reliability,
> - exploring options for adding new technology such as energy storage and hydrogen powered generation, and
> - pursuing the process of extending the life of Xcel's Monticello Nuclear Generating Plant (Monticello) in Monticello, Minnesota.
>
> Under this plan, Xcel will reduce its greenhouse gas emissions by 86 [percent] relative to 2005 levels; by 2032, 81 [percent] of Xcel's electricity will be generated from carbon-free resources.[143]

144. Xcel Energy also proposed retirement dates for its remaining Sherco coal units in the IRP proceeding. The Commission generally agreed, directing Xcel Energy to retire Sherco Unit 3 by 2030.[144]

[143] CN Application at 2–3; IRP Order at 3.

[144] The Commission also directed Xcel Energy to retire the Allen S. King Generating Station (King) in 2028 and to begin permitting proceedings for a transmission line designed to permit new energy resources to connect to the grid at that location. See IRP Order at Ordering ¶¶ 2.A.4; 2.A.6. That transmission line will be the subject of separate permitting processes.

145. Previously, in connection with Xcel Energy's 2016–2030 IRP, the Commission approved Xcel Energy's plan to retire Sherco Units 1 and 2 in 2026 and 2023, respectively.[145]

146. The Commission also found that Xcel Energy proved that it needs to procure 600 MW of solar power and 2,150 MW of wind power, or an equivalent amount of energy and capacity from a combination of wind, solar, and storage between 2027 and 2032, in order to meet projected energy and capacity needs.[146]

147. During the IRP proceeding, Xcel Energy proposed to construct two 345 kV generation interconnection lines, known colloquially as "gen-ties," between Lyon County and the existing Sherco Substation. The interconnection would permit the transfer of needed energy resources and optimize Xcel Energy's valuable interconnection rights at the Sherco Substation. Xcel Energy proposed two 345 kV gen-tie lines would deliver 1,996 MW to Sherco. As part of that proposal, Xcel Energy included combustion turbine (CT) capacity of approximately 400 MW with a clutch that can provide the same attributes as a synchronous condenser, slated to be installed at Lyon County. The proposed CT capacity would have provided required system support for the gen-ties, in addition to meeting customers' capacity needs. The Commission determined that it is more likely than not that 800 MW of firm capacity will be needed between 2027 and 2029 but deferred the selection of the resources to meet this firm capacity need to a separate resource acquisition docket.[147]

148. The Commission ordered Xcel Energy to begin proceedings to obtain a Certificate of Need and Route Permit for the gen-ties.[148]

149. This Project is thus one part of an overall resource acquisition plan. The generators that will connect to the Project will be identified through separate processes and will be subject to separate regulatory approvals. Connecting the new renewable energy Xcel Energy will pursue as a result of the IRP process to the Sherco Substation enables Xcel Energy to reuse its valuable and existing transmission interconnection rights (approximately 2,000 MW total). These rights will be retained pursuant to the Federal Energy Regulatory Commission (FERC) Electric Tariff, MISO Attachment X. FERC has granted current generation owners the right to re-use the associated transmission interconnection for new generation at those sites so as to smooth the transition away from carbon-based fuels toward renewable sources of energy.[149]

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[145] CN Application at 3. *In the Matter of Xcel Energy's 2016-2030 Integrated Resource Plan*, MPUC Docket No. E-002/RP-15-21, Order Approving Plan with Modifications and Establishing Requirements for Future Resource Plan Filings at Ordering ¶ 7 (Jan. 11, 2017).

[146] IRP Order at Ordering ¶ 2.A.8. Further, Xcel Energy will acquire, by 2026, of 720 MW of Xcel Energy-owned solar resources to reuse Sherco Unit 2's interconnection rights—which will not require the Project to be interconnected— and 600 MW of solar resources unconstrained by interconnection location or ownership. IRP Order at Ordering ¶ 2.A.5.

[147] CN Application at 3; IRP Order at Ordering ¶ 3.

[148] IRP Order at Ordering ¶ 2.A.6.

[149] CN Application at 4.

150. The Project will enable Xcel Energy to interconnect renewable energy generation at the Sherco site while avoiding the substantial costs that ordinarily accompany obtaining approvals for interconnection for entirely new – and not re-purposed – generation sources. For Xcel Energy's modeling, the Applicant assumed interconnection costs in 2021 dollars on a Net Present Value (NPV) of $500/kW for wind and $200/kW for solar. These estimates follow from the current MISO queue constraints and review of the latest Definitive Planning Phase process, where interconnection costs are assigned. These estimates remain appropriate for MISO interconnection costs.[150]

C. Transmission Line Structures and Conductors

151. The Project would be constructed primarily of single (monopole) steel pole structures. For angles and dead-end structures, a multiple pole design will be used. All transmission structures will be a double-circuit 345 kV/345 kV design and proposed to be weatherizing steel. Other specialty structures may be used depending on site-specific conditions.[151]

152. Each 345 kV line will utilize bundled (twisted pair) 2x636 kcmil Aluminum Conductor Steel Reinforced or similar performance conductor. This is the preferred conductor in areas of icing with wind that can lead to galloping. Galloping is where conductors oscillate in large vertical motion due to wind or ice loading and can result in outages or damage to insulators causing mechanical failures. These double bundled conductors will have a capacity equal to or greater than 3,000 amps.[152]

153. Typically, the proposed structures will range in height between 90- to 160- feet tall and will be installed on a drilled pier concrete foundation at a depth of 30 to 40 feet. Where existing transmission lines are crossed, structure heights could be up to 195 feet tall.[153]

154. Specialty foundations may be required due to geotechnical (or soil) conditions. Foundation depth could be up to 60 to 70 feet in depth be based on site-specific conditions and detailed engineering design.[154]

155. The typical spans between structures will be approximately 1,000 feet.[155]

156. The Project will be designed to meet or surpass relevant local and state codes including the National Electric Safety Code (NESC) and Xcel Energy's standards. Applicable standards – including safety standards – will be met during design, construction and operation phases.[156]

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[150] CN Application at 4. The equivalent NPV in 2023 dollars is $564/kW for wind and $225/kW for solar.
[151] Ex. Xcel-2 at 13 (RP Application).
[152] *Id.*
[153] *Id.*
[154] *Id.*
[155] *Id.*
[156] *Id.* at 14.

D. Substations and Associated Facilities

157. Associated facilities for the proposed Project include modifications to the existing Sherco Solar West Substation and the Sherco Substation, a new Garvin Substation in Lyon County, a new Voltage Support Substation near the approximate midpoint of the transmission line, and a new Intermediate Substation about 20 miles north of the Garvin Substation.[157]

158. The locations of the Sherco and Sherco West Substations are known. Likewise, during this proceeding, Xcel Energy identified proposed locations for the Garvin Substation (applicable to both the Blue and Purple Routes) and the voltage support substation along the Blue Route.[158]

159. The precise location of the remaining substations have not been identified and will be determined once a route is approved by the Commission.[159]

160. Xcel Energy is working to identify a location for each facility that avoids environmentally sensitive areas – including but not limited to, wetlands, public lands, native plant communities, and historic sites. Xcel Energy intends to seek agreement with willing landowners for the location of the new substations, to the extent agreement has not already been reached.[160]

161. The Sherco Solar West Substation, owned by Xcel Energy, is the northern endpoint of the proposed double circuit 345 kV transmission line. This substation is located just outside the City of Becker, adjacent to Xcel Energy's Sherco Solar West solar facility. It interconnects the solar facility with the Sherco Substation via the Sherco Solar West 345 kV transmission line (Line 5651).[161]

162. To accommodate this Project, the Sherco Solar West Substation will require expansion – although entirely on property that Xcel Energy now owns. The Project includes installation of new substation equipment such as: breakers, switches, continuously variable transmissions (CVTs), arresters, and bus work.[162]

163. The Project will connect the Sherco Solar West Substation and the Sherco Substation via the Green Segment. The Green Segment would be a new second circuit that is added to the existing Line 5651 gen-tie line between the Sherco Solar West Substation and the Sherco Substation.[163]

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[157] *Id.* at 13.
[158] *Id.* at 15-16 (RP Application); Ex. EERA-12 at 440, 447–448, and Figure 14-1 (DEIS); FEIS at 458, 465—467, and Figure 14-1; Ex. Xcel-16 at 10 (Langan Direct); Xcel Energy Comments on DEIS at 7 (Nov. 25, 2024) (eDocket No. 202411-212383-01).
[159] Ex. Xcel-2 at 13 (RP Application).
[160] *Id.* at 15–16.
[161] *Id.* at 16.
[162] *Id.*
[163] *Id.*

164. The Applicant also proposes modifications to the Sherco Substation to accommodate termination of the second circuit between Sherco and Sherco Solar West Substations. However, all of the additional equipment associated with the modifications can be installed within the existing fence line of the substation.[164]

165. Xcel Energy proposes to construct a new 345 kV Voltage Support Substation approximately 80 miles south of the Sherco Solar West Substation. A control building and road access will also be constructed at the site of the Voltage Support Substation. The Voltage Support Substation footprint will be approximately 30 acres in size. Xcel Energy intends to purchase property that is approximately 40 to 80 acres in size to accommodate the substation footprint and additional acreage that may be needed for transmission line connections.[165]

166. Xcel Energy proposes to construct an Intermediate Substation approximately 20 miles north of the Garvin Substation. The Intermediate Substation will occupy an approximately 20-acre footprint and facilitate the interconnection of renewable resources to that substation. Xcel Energy intends to purchase property that is approximately 40 to 80 acres in size to accommodate the substation footprint and additional acreage that may be needed in the future for line connections and connections for new generators.[166]

167. The new Garvin Substation in Lyon County would be the southern endpoint of the transmission line. This substation would be located approximately one mile north of the Town of Garvin, south/southeast of the intersection of U.S. Highway 14 and U.S. Highway 59.[167]

168. The Garvin Substation will facilitate the interconnection of renewable resources to that substation. The substation will be approximately 40 acres in size and include the installation of two 116/-58 MVAR synchronous condensers, shunt reactors, breakers, switches, CVTs, arresters, and bus work. A control building and road access will also be constructed at the site of the new Garvin Substation.[168]

169. Xcel Energy has secured purchase options with two landowners for a total of 160 acres that could be used for selecting the final 40-acre Garvin Substation site. The options provide siting flexibility, setbacks from residences and opportunities to accommodate interconnections with future wind generation in the area.[169]

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[164] *Id.*
[165] *Id.*
[166] *Id.* at 16–17.
[167] *Id.* at 17.
[168] *Id.*
[169] *Id.*

E. Right-of-Way and Route Width

170. For most of the Project, Xcel Energy is requesting a route width of 1,000 feet. [170]

171. For the Green Segment, Xcel Energy requests a route width of 150 feet. This width corresponds to the existing 150-foot right-of-way for Line 5651 – the gen-tie line between the Sherco Solar West Substation and the Sherco Substation.[171]

172. Xcel Energy is requesting additional route widths between 0.5 mile and up to 1.25 miles surrounding the Garvin, Intermediate, and Voltage Support Substations to provide flexibility in substation location and routing the lines in and out of the new substations.[172]

173. For the right-of-way, Xcel Energy is generally seeking a 150-foot-wide right-of-way, which will be located within the requested route width.[173]

174. In some areas, a wider right-of-way may be needed based upon site-specific and design-specific considerations. For example, a horizontal configuration at the Mississippi River crossing would require a 250-foot right-of-way because the lower height of the horizontal configuration requires the use of additional structures.[174]

175. Xcel Energy is also requesting additional route widths in certain areas where natural resources and state conservation easements exist. Wider widths in these areas would permit Xcel Energy to avoid such areas whenever practicable.[175]

176. When paralleling existing road rights-of-way, Xcel Energy proposes generally to place poles on adjacent private property, approximately a 10-foot offset from the existing road right-of-way. Placement of the poles would be subject to easements with landowners and road authority design requirements, both of which could affect the offset distance.[176]

F. Project Schedule

177. Xcel Energy plans to commence construction of the Project in the first quarter of 2026, beginning with tree clearing.[177]

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[170] *Id.* at 9; Ex. Xcel-16 at 4 (Langan Direct).
[171] Ex. Xcel-2 at 9 (RP Application).
[172] Ex. Xcel-16 at 10 (Langan Direct); *see also* Ex. Xcel-2 at 15 (RP Application).
[173] Ex. Xcel-16 at 4 (Langan Direct).
[174] Xcel Energy Response to Hearing Comments at 18, 32-33 (Dec. 13, 2024).
[175] Ex. Xcel-2 at 10–11 (RP Application).
[176] *Id.* at 15.
[177] Xcel Energy Comments at 3 (September 6, 2024) (eDocket No. 20249-210022-02); Ex. Xcel-17 at 3 (Samuel Direct).

178. Xcel Energy forecasts the following permitting and construction schedule–with facility construction to commence in the second quarter of 2026:

Activity	Estimated Dates
Certificate of Need/Route Permit	March 2025
Land survey access and land acquisition	June 2024 - 2025
Required federal, state and local permits obtained	Q2 2025 – Q2 2026
Start Project construction with tree clearing	Q1 2026
Start facility construction	Q2 2026
Gen-Ties in-service (1,000 MW enabled)	Q3 2028
Project Complete with all substations built out	Q4 2031[178]

G. Project Costs

179. The Project is estimated to cost between $1.274 billion to $1.302 billion depending upon the route that is selected. These costs include all transmission line costs, right-of-way costs, risk contingencies for the transmission line and cost for substation modifications at the Sherco Solar West, Sherco, Voltage Support, Intermediate, and Garvin Substations. The transmission line is expected to cost approximately $4.4 million per mile (including land acquisition).[179]

H. Permittee

180. Northern States Power Company, a Minnesota corporation, doing business as Xcel Energy, is the permittee for the Project.[180]

IV. ROUTES EVALUATED FOR PROJECT

A. Applicant's Route Development

181. Xcel Energy conducted a thorough and systematic route selection process beginning in 2022 and extending through mid-2023. This process included identifying,

[178] Xcel Energy Comments at 3 (September 6, 2024) (eDocket No. 20249-210022-02); Ex. Xcel-17 at 3 (Samuel Direct).
[179] Ex. Xcel-17 at 4 (Samuel Direct).
[180] Ex. Xcel-2 at 4 (RP Application).

refining, and comparing route options to arrive at the proposed route options and connector segments identified in the RP Application.[181]

182. Xcel Energy's route development process included consideration of statutory and rule requirements, information gathering, outreach to the public, receipt of input from interested stakeholders (including multiple rounds of public meetings), and comparisons of various route segments and alignments.[182]

183. Xcel Energy developed a geographic information system (GIS) database of information gathered from publicly available data sources and from on-site field reviews. This database was used to compare the merits of various routing options with a goal of developing Application Routes that minimize impacts to sensitive resources.[183]

184. Xcel Energy undertook the following steps in this process:

- Establish boundaries for Routing Study Area;
- Identify opportunities and constraints;
- Conduct local government and agency outreach;
- Conduct initial outreach in the routing study area;
- Review initial route network in the field;
- Hold public open house meetings;
- Review and refine routes, run comparative analysis to remove most impactful routes;
- Hold second round of open house meetings;
- Review, refine routes, run comparative analysis to remove most impactful routes;
- Optimize preferred route segments and connect for end-to-end routes for RP Application; and
- Conduct constructability review of end-to-end routes.[184]

[181] Ex. Xcel-16 at 7 (Langan Direct).
[182] *Id.*
[183] *Id.*; Ex. Xcel-2 at 3–4 (RP Application).
[184] Ex. Xcel-2 at 25–26 (RP Application); *see* Ex. Xcel-2 at Sections 3.2 and 3.3 (RP Application).

185. To minimize impacts on the environment and landowners, Xcel Energy stated that, where feasible, it would work to avoid the following areas within the Routing Study Area:

- Residences: No occupied residences within the transmission line's 150-foot-wide right-of-way.
- Municipal boundaries: No 150-foot-wide right-of-way for the transmission lines proposed through cities.
- Tribally-owned properties: No routes through land owned by Tribal governments.
- Federally-owned properties: No routes through U.S. Fish and Wildlife Service Waterfowl Production Areas, historic landmarks, or publicly owned properties that were acquired with federal Land and Water Conservation Act funding.
- State-owned properties: No routes through State Parks, Wildlife Management Areas, Scientific and Natural Areas, or Aquatic Management Areas.
- Lakes, Rivers, and Calcareous Fens: No routes are proposed that would require placement of a transmission structure foundation in a lake, river, or calcareous fen.
- Public Airports: No routes are proposed that would create an aviation hazard at a public airport per Federal Aviation Administration and Minnesota Department of Transportation regulations.
- Regional, County, and Municipal Parks: No routes are proposed that cross within the boundaries of these recreation lands.
- Cemeteries, Schools, Hospitals, Public Buildings: No routes are proposed that would include these facilities within the transmission line's 150-foot-wide right-of-way.[185]

B. Application Routes

186. As a result of Xcel Energy's routing development process, two route and four connector segments were identified in the RP Application.[186]

[185] Ex. Xcel-16 at 8 (Langan Direct); Ex. Xcel-2 at 26–28 (RP Application).
[186] Ex. Xcel-2 at 22 (RP Application).

i. Green Segment

187. The Green Segment serves as the interconnection from the Sherco Substation to the Sherco Solar West Substation and is common to both the Purple and Blue Routes.[187]

188. The Green Segment will not require additional right-of-way. The existing 150-foot right-of-way is sufficient for adding a second circuit to the existing gen-tie line (Line 5651) between the Sherco Solar West Substation and the Sherco Substation.[188]

189. The Green Segment begins at the Sherco Substation and travels north/ northwest out of the substation, generally paralleling 125th Avenue toward County Road 8. The Green Segment then crosses County Road 8, then turns west paralleling the county road toward County Road 53. At County Road 53, the Green Segment travels north along the east side of the county road for a short stretch, crosses to the west side of the county road, and enters the Sherco Solar West Substation.[189]

ii. Purple Route

190. The Purple Route is the westernmost route proposed for the Project and is approximately 171 miles long, crossing Sherburne, Wright, Stearns, Meeker, Kandiyohi, Chippewa, Renville, Yellow Medicine, and Lyon counties.[190]

191. The Purple Route predominantly follows property lines, agricultural field lines and roads. The Purple Route also follows existing transmission lines where it crosses the Mississippi and Minnesota Rivers.[191]

iii. Blue Route

192. The Blue Route is the easternmost route proposed for the Project, and is approximately 174 miles in length, traversing Sherburne, Stearns, Meeker, Kandiyohi, Renville, Redwood, and Lyon counties.[192]

193. Similar to the Purple Route, the Blue Route predominantly follows property lines agricultural field lines and roads. The Blue Route also follows an existing transmission line where it crosses the Minnesota River.[193]

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[187] *Id.* at 46
[188] *Id.* at 8, 46.
[189] *Id.* at 46.
[190] *Id.* at 8; Ex. Xcel-16 at 5 (Langan Direct).
[191] Ex. Xcel-2 at 8 (RP Application).
[192] *Id.*
[193] *Id.*

C. Route Alternatives Evaluated in EIS

194. During the EIS scoping comment period, members of the public, state agencies, and local units of government recommended 60 route segments, 14 route connectors, and four alternative alignments.[194]

195. EERA staff analyzed the route segments, connectors, and alternative alignments recommended by commenters to determine if their inclusion in the EIS would aid in the Commission's decision on the RP Application. EERA recommended that 48 route segments, 11 route connectors, and four alignment alternatives be evaluated in the EIS.[195]

196. The EIS analyzed route alternatives on a regional basis (Regions A through G).[196]

197. Region A is the southernmost region at the beginning of the project and lies within Lyon County, Minnesota. It includes the Garvin Substation (Section 3.2.4.1) and one of the options for siting the intermediate substation (Section 3.2.4.2). Within Region A, the EIS analyzed seven route segments and four potential refinements, as reflected in Table 3-2 and Table 3-3 of the EIS, depicted below:[197]

Table 3-2 Region A Route Segments Summary

Route Segment Name	Association to Applicant-Proposed Routes [1]	Total Length (miles)
Route Segment A1	applicant-proposed Purple Route	17.5
Route Segment A2	Purple variation	17.6
Route Segment A3	applicant-proposed Blue Route	14.6
Route Segment A4	Blue variation [2]	18.1
Route Segment A5	Blue variation	15.1
Route Segment A6	Blue variation	14.5
Route Segment A7	Blue variation	14.6

[1] This column indicates whether the route segment by region is either a subpart of the Purple Route or Blue Route as proposed by the applicant, is a variation of one the applicant-proposed routes, or includes components of both of the applicant-proposed routes.
[2] This variation includes Route Connector 101 which was proposed by the applicant as Connector D. It connects to the Purple Route at the conclusion of this region.

[194] Ex. EERA-7 at 6 (Scoping Summary and Recommendation).
[195] *Id.* at 6-7.
[196] Ex. EERA-12 at 33-41 (DEIS); FEIS at 33-40.
[197] Ex. EERA-12 at 33-34 (DEIS); FEIS at 33-34.

Table 3-3 Region A Potential Refinements Summary

Route Segments	Association to Applicant-Proposed Routes [1]	Total Length (miles)
Route Segment 204	Purple	1.5
Route Segment 206	Purple	2.0
Route Segment 207	route segment starting and ending on Route Connector 101	1.0
Route Segment 208	route segment starting and ending on Route Connector 101	1.5

[1] This column indicates whether the route segment leaves and returns to the Purple Route, the Blue Route, or Route Connector 101.

198. Region B includes options for siting the intermediate substation (Section 3.2.4.2) and the support substation (Section 3.2.4.3). It is in Lyon, Yellow Medicine, Chippewa, Redwood, and Renville counties, Minnesota. This region also includes the towns of Franklin, Hanley Falls, and Wood Lake. Within Region B, the EIS analyzed four route segments and 12 potential refinements, as reflected in Table 3-5 and Table 3-6 of the EIS, depicted below:[198]

Table 3-5 Region B Route Segments Summary

Route Segment Name	Association to Applicant-Proposed Routes [1]	Total Length (miles)
Route Segment B1	applicant-proposed Purple Route	45.4
Route Segment B2	Blue to purple variation [2]	51.0
Route Segment B3	Purple variation	46.9
Route Segment B4	applicant-proposed Blue Route	75.3

[1] This column indicates whether the route segment by region is either a subpart of the Purple Route or Blue Route as proposed by the applicant, is a variation of one the applicant-proposed routes, or includes components of both of the applicant-proposed routes.
[2] This variation includes Route Connector 102, which was proposed as a route alternative during scoping and includes a portion of the Purple Route.

[198] Ex. EERA-12 at 34-36 (DEIS); FEIS at 34-36.

Table 3-6 Region B Potential Refinements Summary

Route Segments	Association to Applicant-Proposed Routes [1]	Total Length (miles)
Route Segment 210	Purple	0.5
Route Segment 221	Purple	3.2
Route Segment 211	Blue	7.0
Route Segment 219	Blue	7.1
Route Segment 212	Blue	4.5
Route Segment 213	Blue	5.0
Route Segment 214	Blue	2.2
Route Segment 220	Blue	2.3
Route Segment 215	Blue	2.4
Route Segment 216	Blue	2.2
Route Segment 217	Blue	3.5
Route Segment 218	Blue	3.5

[1] This column indicates whether the route segment leaves and returns to the Purple Route or leaves and returns to the Blue Route.

199. Region C includes a potential location of the support substation (Section 3.2.4.3). It is in Chippewa, Kandiyohi, Renville, and Meeker counties, Minnesota. This region also includes the city of Prinsburg. Within Region C, the EIS analyzed four route segments and four potential refinements, as reflected in Table 3-8 and Table 3-9 of the EIS, depicted below:[199]

Table 3-8 Region C Route Segments Summary

Route Segment Name	Association to Applicant-Proposed Routes [1]	Total Length (miles)
Route Segment C1	applicant-proposed Purple Route	56.0
Route Segment C2	Purple to blue variation [2]	58.5
Route Segment C3	Purple to blue variation [3]	57.9
Route Segment C4	applicant-proposed Blue Route	28.6

[1] This column indicates whether the route segment by region is either a subpart of the Purple Route or Blue Route as proposed by the applicant, is a variation of one the applicant-proposed routes, or includes components of both of the applicant-proposed routes.
[2] This variation starts at the Purple Route, includes Route Connector 103 which was proposed as a route alternative during scoping, and includes a portion of the Blue Route.
[3] This variation starts at the Purple Route, includes Route Connector 104 which was proposed by the applicant as Connector C, and includes a portion of the Blue Route.

[199] Ex. EERA-12 at 36-37 (DEIS); FEIS at 37.

Table 3-9 Region C Potential Refinements Summary

Route Segments	Association to Applicant-Proposed Routes [1]	Total Length (miles)
Route Segment 224	Purple	3.8
Route Segment 225	Purple	2.2
Route Segment 222	Blue	8.0
Route Segment 223	Blue	8.0

[1] This column indicates whether the route segment leaves and returns to the Purple Route or leaves and returns to the Blue Route.

200. Region D is in Meeker County. Within Region D, the EIS analyzed eight route segments and one potential refinement, as reflected in Table 3-11 from the EIS, depicted below:[200]

Table 3-11 Region D Route Segments Summary

Route Segment Name	Association to Applicant-Proposed Routes [1]	Total Length (miles)
Route Segment D1	applicant-proposed Purple Route	9.1
Route Segment D2	Purple variation	9.2
Route Segment D3	Purple to blue variation	10.1
Route Segment D4	applicant-proposed Blue Route	10.8
Route Segment D5	Blue variation [2]	10.9
Route Segment D6	Blue variation	11.4
Route Segment D7	Blue variation [3]	12.8
Route Connector 105	Can connect Purple Route and Blue Route in either direction	1.0

[1] This column indicates whether the route segment by region is either a subpart of the Purple Route or Blue Route as proposed by the applicant, is a variation of one the applicant-proposed routes, or includes components of both of the applicant-proposed routes.
[2] Includes a portion of Route Connector 106, which was proposed by the applicant as Connector A.
[3] This variation includes a portion of the Blue Route, Route Connector 106 which was proposed by the applicant as Connector A, and a portion of the Purple Route.
[4] Route Connector 105 was proposed by the applicant as Connector B.

201. Region E is in Meeker and Stearns Counties, Minnesota. Within Region E, the EIS analyzed three route segments and three potential refinements, as reflected in Table 3-13 and Table 3-14 from the EIS, depicted below:[201]

[200] Ex. EERA-12 at 38 (DEIS); FEIS at 38.
[201] Ex. EERA-12 at 39 (DEIS); FEIS at 39.

Table 3-13 Region E Route Segments Summary

Route Segment Name	Association to Applicant-Proposed Routes [1]	Total Length (miles)
Route Segment E1	applicant-proposed Purple Route	17.7
Route Segment E2	applicant-proposed Blue Route	16.6
Route Connector 107	Can connect Purple Route and Blue Route in either direction	1.0

[1] This column indicates whether the route segment by region is either a subpart of the Purple Route or Blue Route as proposed by the applicant, is a variation of one the applicant-proposed routes, or includes components of both of the applicant-proposed routes.

Table 3-14 Region E Potential Refinements Summary

Route Segments	Association to Applicant-Proposed Routes [1]	Total Length (miles)
Route Segment 230	Purple	0.7
Route Segment 231	Purple	4.2
Route Segment 232	Purple	1.8

[1] This column indicates whether the route segment leaves and returns to the Purple Route, or leaves and returns to the Blue Route.

202. Region F is in Stearns County, Minnesota. Within Region F, the EIS analyzed nine route segments, as reflected in Table 3-15 of the EIS, depicted below:[202]

Table 3-15 Region F Route Segments Summary

Route Segment Name	Association to Applicant-Proposed Routes [1]	Total Length (miles)
Route Segment F1	applicant-proposed Purple Route	2.2
Route Segment F2	Purple to blue variation [2]	2.3
Route Segment F3	Purple to blue variation [3]	2.7
Route Segment F4	applicant-proposed Blue Route	2.7
Route Segment F5	Blue to purple variation [4]	2.4
Route Segment F6	Blue variation	2.7
Route Segment F7	Purple variation	2.1
Route Segment F8	Blue to purple variation [5]	2.7
Route Connector 108	Can connect Purple Route and Blue Route in either direction	0.5

[1] This column indicates whether the route segment by region is either a subpart of the Purple Route or Blue Route as proposed by the applicant, is a variation of one the applicant-proposed routes, or includes components of both of the applicant-proposed routes.
[2] This variation starts at the Purple Route, includes Route Connector 104 which was proposed as a route alternative during scoping, and includes a portion of the Blue Route.
[3] This variation includes a portion of the Purple Route, Route Connector 109 which was proposed by the DNR during scoping, and a portion of the Blue Route.
[4] This variation includes a portion of the Blue Route, a portion of a route segment which was proposed as a route alternative during scoping, and ends at the Purple Route.
[5] This variation includes a portion of the Blue Route, a portion of a route connector and a route segment which were proposed as a route alternative during scoping, and a portion of the Purple Route.

[202] Ex. EERA-12 at 40 (DEIS); FEIS at 40.

203. Region G ends at the Sherco Solar West Station (Section 3.2.4.4) and is the northernmost region. It is in Stearns, Sherburne, and Wright Counties, Minnesota. This region also includes the cities of St. Augusta and St. Cloud. Within Region G, the EIS analyzed six route segments and 15 potential refinements, as reflected in Table 3-17 and Table 3-18 of the EIS, depicted below:[203]

Table 3-17 Region G Route Segments Summary

Route Segment Name	Association to Applicant-Proposed Routes [1]	Total Length (miles)
Route Segment G1	applicant-proposed Blue Route	25.4
Route Segment G2	Blue variation	24.6
Route Segment G3	applicant-proposed Purple Route	22.7
Route Segment G4	Blue to purple variation [2]	25.0
Route Segment G5	Purple variation	24.3
Route Segment G6	Blue to purple variation [3]	22.7

[1] This column indicates whether the route segment by region is either a subpart of the Purple Route or Blue Route as proposed by the applicant, or is a variation of one the applicant-proposed routes, or includes components of both of the applicant-proposed routes.
[2] This variation includes a portion of the Blue Route, Route Connector 115 which was proposed by the DNR during scoping, and ends at the Purple Route.
[3] This variation includes a portion of the Blue Route, Route Connector 111 which was proposed as a route alternative during scoping DNR during scoping, and ends at the Purple Route.

Table 3-18 Region G Potential Refinements Summary

Route Segments	Association to Applicant-Proposed Routes [1]	Total Length (miles)
Route Segment 235	Blue	3.2
Route Segment 236	Blue	3.4
Route Segment 237	Blue	3.3
Route Segment 238	Blue	3.2
Route Segment 239	Blue	3.2
Route Segment 240	Blue	3.2
Route Connector 249	Can connect Purple Route and Blue Route	2.5
Route Segment 244	Blue	2.1
Route Segment 245	Blue	4.2
Route Segment 246	Blue	6.9
Route Segment 242	Purple	1.1
Route Segment 250	Can connect Purple Route and Blue Route	1.3
Route Segment 243	Purple	2.1
Route Segment 247	Purple	2.0
Route Segment 248	Purple	2.3

[1] This column indicates whether the route segment leaves and returns to the Purple Route, or leaves and returns to the Blue Route.

[203] Ex. EERA-12 at 40-41 (DEIS); FEIS at 41.

D. Applicant's Preferred Route

204. At the time of filing the RP Application, Xcel Energy did not identify a preference between the Blue and Purple Routes. In the Direct Testimony of Matthew Langan, however, the Applicant stated that it had analyzed the route and alignment alternatives that would be studied in the EIS and, as a result of that analysis, determined that a modified Blue Route was the Applicant's preferred route (Preferred Route).[204]

205. As defined in Direct Testimony, the Preferred Route included the Green Segment and the Blue Route, modified by the following route segment alternatives: 202, 212, 216, 219, 226, and 244. This Preferred Route (with the Green Segment) is approximately 178 miles long and within Sherburne, Stearns, Kandiyohi, Meeker, Renville, Redwood, and Lyon counties. Without the Green Segment, the Preferred Route is approximately 175 miles long.[205]

206. Xcel Energy maintains that avoiding alignments that are close to residences is a key concern of area landowners. It asserts that the Blue Route has the fewest impacts across many resource categories, including the fewest residences within 300 and 500 feet of the Project centerline.[206]

207. The inclusion of the six route segment alternatives results in further reducing impacts to the following resources:

- Native Plant Communities
- Sites of Biodiversity
- Forested upland
- Forested wetland
- MDNR Public Waters
- Crossing of the Cottonwood River
- Agriculture.[207]

208. The Preferred Route includes Xcel Energy's preferred crossing locations for the Minnesota, Mississippi, and Crow Rivers.[208]

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[204] Ex. Xcel-16 at 15 (Langan Direct).
[205] *Id.*
[206] *Id.* at 16.
[207] *Id.*
[208] *Id.* at 17.

209. More specifically, when developing the Blue and Purple Routes, Xcel Energy considered six potential crossings of the Mississippi River (see RP Application § 3.3.1).[209]

210. Crossings 1 through 4 considered by Xcel Energy were somewhat favorable due to Xcel Energy ownership of land on both sides of the Mississippi River; however, the land south and west of the river crossing is a residential area with limited availability for a 150-foot right-of-way.[210]

211. Crossing 5 considered by Xcel Energy would follow existing infrastructure at the river crossing but would result in residential impacts south and west of Sherco.[211]

212. Ultimately, Xcel Energy prefers Crossing 6, which is part of the Preferred Route (and the Blue Route). Although Crossing 6 does not have existing infrastructure at the crossing, it is located adjacent to undeveloped land and would cross at a narrow river channel. As compared to other potential crossings, this crossing of the Mississippi River minimizes impacts to residences.[212]

213. Mr. Langan described the engineering benefits of the Preferred Route, stating that the Applicant anticipates that the Preferred Route will have fewer structures and foundations, as well as approximately half the number of crossings of existing transmission lines of 115 kV or greater. Fewer existing structures and crossings improves constructability and ongoing maintenance of the transmission line and reduces the potential for future outages. Additionally, the Preferred Route does not follow railroad corridors, thus obviating the need for costly induction studies and mitigation measures.[213]

214. Route Segment 223 was proposed by a member of the public during scoping and would reduce impacts to the Lux Airstrip, an existing grass airstrip. Xcel Energy does not support incorporating the entirety of Route Segment 223 into the Preferred Route. The southern portion of the segment invites significant impacts to nearby residents and constructability issues due to potential crossings of the existing 69 kV line in this area. However, Xcel Energy does not oppose including a portion of the northern-most of this segment in the alignment, if so ordered by the Commission.[214]

215. Because a short length of the modified Route Segment 223 is not within a route width studied in the DEIS, Xcel Energy provided a table summarizing the potential human and environmental impacts of this segment.[215]

216. Xcel Energy initially objected to Route Segment 213 because of the costs and potential impacts of this segment. The Route Segment comes close to the MDNR's

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[209] *Id.*
[210] *Id.*
[211] *Id.*
[212] *Id.*
[213] *Id.*
[214] *Id.* at 12, 14.
[215] *Id.* at 13.

Sheridan Wildlife Management Area and state conservation easements along the Redwood River; includes a greenfield crossing of the Redwood River; crosses additional wetlands and three angle structures. Route Segment 213 does, however, provide a net reduction of four residences within 300 feet of the transmission line. Therefore, upon further analysis, including review of comments made during the public hearings, Xcel Energy concluded that, although there would higher costs, Route Segment 213 is feasible because the Project alignment could avoid both the Sheridan Wildlife Management Area and conservation easements. Xcel Energy does not object to selection of Route Segment 213 if the Commission designates it as part of the Project's route.[216]

217. In its Response to Hearing Comments, Xcel Energy also explained that it had no position with respect to Route Segment 239. This continues to be the Applicant's view, because the route segment appears to have similar impacts as the corresponding section of the Preferred (Blue) Route.[217]

E. MDNR Route Preferences

218. In its November 25, 2024, comments, MDNR identified its route preferences by region. The table below is taken from Xcel Energy's Response to Hearing Comments and identifies, in each region, MDNR's route preferences, as compared to Xcel Energy's Preferred Route.

Region	MDNR Route Preference	Xcel Energy Preferred Route
A	A6 (Blue)	A6 (Blue)
B	B4 + 211, 214 (Blue)	B4 + 212 + 216 + 219 (Blue)
C	C4 + 223 (Blue)	C4 (Blue)
	105 (Connector B) (Purple)	
D	D1 (Purple)	D5 (Blue)
E	E1 (Purple)	E2 (Blue)
F	F1+ 109 or 110 (Purple)	F4 (Blue)
G	G1 and G4 + (237, 238, 240, 249, or 250+114) + G4 (247 or 248) (Blue to Purple) *OR* G3 + G5 (241) + G4 (247 or 248) (Purple)	G1 + 244 (Blue) [218]

[216] Xcel Energy Response to Hearing Comments at 22 (Dec. 13, 2024).
[217] *Id.* at 24.
[218] *Id.* at 8.

219. MDNR's comments identified multiple potential route segments in some regions. To allow for some comparison among MDNR's route preferences, Xcel Energy's Preferred Route, and the Blue and Purple Routes, Xcel Energy compiled a "proxy" MDNR end-to-end route that includes the following route segments: Route A6; Route B4 and Route Segments 211 and 214; Route C4 with Route Segment 223, and Route Connector 105; Route D1; Route E1; Route F1 and Route Connector 110; and Route G1 with Route Segments 240, 249, and 115; and G3 with Route Segment 248. Xcel Energy notes that selecting a different combination of MDNR's preferred route segments in a proxy routing, in areas where segments overlap would result in different impact calculations.[219]

V. PUBLIC PARTICIPATION

A. Public Outreach

220. Xcel Energy initiated public outreach through correspondence to approximately 150,000 landowners who own parcels within the pre-application routing study area and other area stakeholders. It also conducted virtual open house sessions in November 2022. Approximately 400 people attended the online meetings where Project representatives presented an overview of the Project plan and associated regulatory process.[220]

221. Xcel Energy next conducted two rounds of "open houses," that included both online and in-person sessions. Open house invitations were sent to landowners with parcels in the routing study area on February 1, 2023. The first round of open houses was held in February and March 2023, and were attended by approximately 550 people. After refining the route options, Xcel Energy sent second open house invitations to landowners within the area, on May 24, 2023. The second round of open houses was held in June 2023 and attended by approximately 725 people.[221]

222. During the public open houses, formal and informal comments were collected and summarized. Common topics included the following:

- Proximity to residences;
- Avoiding and mitigating impacts agriculture;
- Impacts to agricultural land uses that follow from paralleling existing transmission lines;
- Following section lines, property lines, field lines, roads, and highways;
- Avoiding environmentally sensitive areas;

[219] *Id.* at 18-19.
[220] Ex. Xcel-2 at 216 (RP Application).
[221] *Id*.

- Aesthetic impacts;
- Impacts to property values; and
- Safety.[222]

B. Public Comments

223. Public hearings and DEIS meetings were held as follows:

Date	Time	Meeting Location
October 29, 2024	11:00 a.m. – 2:30 p.m.	Monticello Community Center 505 Walnut Street Monticello, Minnesota 55362
October 29, 2024	6:00 p.m.	Virtual public hearing WebEx Platform
October 30, 2024	10:00 a.m. – 1:30 p.m.	Litchfield Opera House 136 N Marshall Avenue Litchfield, Minnesota 55355
October 30, 2024	5:00 p.m. – 8:30 p.m.	Kimball Schools Cafetorium 100 Highway 55 West Kimball, Minnesota 55353
November 6, 2024	10:00 a.m. – 1:30 p.m.	Kilowatt Community Center 600 Kilowatt Drive Granite Falls, Minnesota 56241
November 6, 2024	5:00 p.m.– 8:30 p.m.	Max's Grille 2425 W Lincoln Avenue Olivia, Minnesota 56277
November 7, 2024	10:00 a.m. – 1:30 p.m.	5 Family Ranch 2717 County Road 6 Marshall, Minnesota 56258
November 7, 2024	5:00 p.m.– 8:30 p.m.	Redwood Area Community Center 901 East Cook Street Redwood Falls, Minnesota 56283 [223]

224. During the public hearings, attendees had the opportunity to provide comments and ask questions about the Project and the DEIS prepared by EERA.[224]

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[222] *Id*. at 217–18.
[223] Notice of Informational Meetings, Public and Evidentiary Hearings, and Availability Of Draft Environmental Impact Statement (October 15, 2024) (eDocket No. 202410-210963-02).
[224] *Id.* at 3 ("Attendees will have an opportunity to review maps and materials on the proposed MNEC Project and ask questions of Xcel Energy and state staff").

225. As identified in Section II above, from October 15, 2024, to November 25, 2024, interested persons submitted written comments on the Project and the DEIS.[225]

VI. TRIBAL, FEDERAL, STATE, AND LOCAL PARTICIPATION

A. Applicant's Outreach

i. Tribal Nations

226. Xcel Energy has engaged with all Tribal Nations sharing geography with Minnesota, including those Tribal Nations with land nearest to the Project.[226]

227. Xcel Energy met with the Upper Sioux Community Pezihutazizi Oyate Tribal Historic Preservation Officer (THPO) on March 2, 2023. It followed up on that meeting by providing electronic routing files to both the Upper Sioux Community Pezihutazizi Oyate and the Lower Sioux Indian Community.[227]

228. The Upper Sioux Community Pezihutazizi Oyate responded to the Project notification letter on October 10, 2023. The Upper Sioux Community Pezihutazizi Oyate noted that they are interested in continuing to consult on the Project, as the Project areas are part of their ancestral homeland, pass near their current reservation boundary, and cross through some areas that potentially include culturally significant sites.[228]

229. The Bois Forte Band of Chippewa responded to the Project notification letter on September 22, 2023. The Boise Forte Band of Chippewa stated that the Band will defer to the recommendations of the Upper Sioux Community Pezihutazizi Oyate and the Lower Sioux Indian Community, whichever is the lead Tribal agency for the Project. The Boise Forte Band of Chippewa further recommended that Tribal monitors be present during ground disturbing activities within a buffer of 250 yards of known historical sites and near the Minnesota River.[229]

230. Xcel Energy sought comments from Tribal Nations on the company's methodologies for its Phase I Cultural Resource Reconnaissance survey and Architectural History Inventory survey and pledges to share those results.[230]

231. Xcel Energy is currently in the process of seeking voluntary access for cultural resource surveys in certain portions of the Project and pledges to invite representatives of those Nations to participate in the surveys.[231]

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[225] *See* Section II *supra*.
[226] Ex. Xcel-16 at 22 (Langan Direct).
[227] Ex. Xcel-2 at 213 (RP Application); Ex. Xcel-5 at Appendix E (RP Application, Agency Correspondence).
[228] Ex. Xcel-5 at Appendix E (RP Application, Agency Correspondence).
[229] Ex. Xcel-2 at 213 (RP Application); *see* Ex. Xcel-5 at Appendix E (RP Application, Agency Correspondence).
[230] Ex. Xcel-16 at 22 (Langan Direct); Ex. Xcel-19 at 3 (Langan Surrebuttal).
[231] Ex. Xcel-16 at 22 (Langan Direct).

232. Most recently, Xcel Energy has contacted the Upper Sioux Community and the Lower Sioux Indian Community to discuss the DEIS, public hearing schedule, and the associated comment periods.[232]

ii. Federal Agencies

233. In September of 2023, Xcel Energy began its public outreach to federal agencies – including the U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service (FWS), and U.S. Department of Agriculture-Natural Resource Conservation Service (USDA-NRCS) – through Project introduction letters.[233]

234. The Federal Aviation Administration (FAA) responded to the Project notification letter on September 22, 2023. It directed Xcel Energy to use the Notice Criteria Tool to determine whether Form 7460-1, "Notice of Proposed Construction or Alteration," is required for the Project.[234]

235. On October 12, 2023, USACE provided comments outlining the potential regulatory requirements for the Project and the process for obtaining permits under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act.[235]

236. Xcel Energy is continuing to coordinate with the USACE regarding the Project because the Project will both types of permits. The USACE permitting process, however, will not begin until after a Commission decision on the Project's final route.[236]

iii. State Agencies

237. Xcel Energy met with the Minnesota Department of Agriculture (MDA) on December 20, 2022, to provide Project background and proposed route options.[237]

238. MDA staff indicated that an Agriculture Impact Mitigation Plan (AIMP) should be prepared for the Project. Xcel Energy prepared a Draft AIMP and will continue to coordinate with the MDA to finalize this plan prior to construction of the Project.[238]

239. Xcel Energy met with MDNR staff on December 19, 2022, March 16, 2023, and May 24, 2023, to discuss impacts to state resources – including Sites of Biodiversity Significance, Native Plant Communities, native prairie areas, and the crossings of the Mississippi, Crow, and Minnesota Rivers. MDNR provided comments in a letter dated July 10, 2023, recommending further review of certain areas along the routes to reduce impacts to sensitive areas such as DNR Wildlife Management Areas (WMAs) and trout

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[232] Ex. Xcel-19 at 3 (Langan Surrebuttal).
[233] Ex. Xcel-2 at 212 (RP Application); Ex. Xcel-5 at Appendix E (RP Application, Agency Correspondence).
[234] Ex. Xcel-2 at 212 (RP Application); Ex. Xcel-5 at Appendix E (RP Application, Agency Correspondence).
[235] Ex. Xcel-2 at 212 (RP Application); Ex. Xcel-5 at Appendix E (RP Application, Agency Correspondence).
[236] Ex. Xcel-16 at 18 (Langan Direct).
[237] Ex. Xcel-2 at 213 (RP Application).
[238] *Id.*; *see also* Xcel-6 at Appendix H (RP Application, Draft AIMP).

streams. Xcel Energy refined several route options based upon these recommendations.[239]

240. Xcel Energy met with the MnDOT on December 19, 2022, and August 3, 2023. The meetings included a discussion of the Project and potential route options. Xcel Energy received a comment letter on August 30, 2023, from MnDOT in which it provided comments and recommendations from different divisions of the agency.[240]

241. Xcel Energy met with the Minnesota Board of Water and Soil Resources (BWSR) on August 20, 2023. The discussion focused on routes that intersected with BWSR conservation easements. BWSR staff indicated additional evaluation would be required to assess compatibility of the Project with each easement.[241]

iv. Local Government Units

242. Xcel Energy met with representatives of local units of government, including Wright, Nicollet, Chippewa, Lyon, Renville, Stearns, Meeker, Redwood, Kandiyohi, and Sherburne counties throughout 2023. These meetings included discussions of the Project, routing and regulatory processes, Project timelines, engagement of landowners and the public, planned development in municipal areas, and future road and highway projects.[242]

B. Participation in Route Permit Docket.

243. In addition to the pre-application outreach conducted by the Applicant, comments were also submitted in the Commission dockets by one Tribal Nation and state and local government units.[243]

i. Tribal Nations

244. On March 20, 2024, the Commission filed a public comment from the Lower Sioux Indian Community regarding potential culturally sensitive locations.[244]

ii. State Agencies

245. On February 21, 2024, MDNR filed comments identifying route alternatives and issues for consideration in the EIS, including impacts to: the Mississippi River from a route crossing; designated wild, scenic, and recreational rivers; other public waters; calcareous fen; wildlife management areas; sites of biodiversity significance; native plant communities; and state-listed species. Additionally, MDNR highlighted the need to

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[239] Ex. Xcel-2 at 214 (RP Application); *see* Ex. Xcel-5 at Appendix E (RP Application, Agency Correspondence).
[240] Ex. Xcel-2 at 214 (RP Application).
[241] *Id.*
[242] *Id.*
[243] *See* Footnotes 245 – 254 *infra*.
[244] Public Comments (Lower Sioux Indian Community) (Mar. 20, 2024) (eDocket No. 20243-204502-01).

explore best practices around facility lighting, dust control, and wildlife-friendly erosion control methods. On November 26, 2024, MDNR filed comments on the DEIS.[245]

246. On February 21, 2024, MnDOT filed comments explaining that the Project has the potential to impact state trunk highways, that ongoing coordination with MnDOT should occur, and that permits and approvals from MnDOT may be required. On November 25, 2024, MnDOT filed comments on the DEIS.[246]

iii. Local Government Units

247. Prior to Xcel Energy filing the CN Application and RP Application, the Commission received comments on the Project from the Harvey Township Board and Meeker County Board. On May 17, 2023, the Commission filed a letter from the Harvey Township Board, dated May 8, 2023, opposing the Project. On August 8, 2023, the Commission filed a public comment from the Meeker County Board, dated June 20, 2023. The County Board requested additional public engagement, including public meetings and open houses in Meeker County to address the concerns of local residents.[247]

248. On February 28, 2024, the Wright County Board of Commissioners filed a public comment stating its preference for the proposed route that crosses over Interstate 94 in Stearns County and follows CSAH 8 south to Becker.[248]

249. On March 20, 2024, EERA filed a comment from the Clearwater Township Clerk concerning the Clearwater Township Route. On November 25, 2024, the Commission filed a public comment from the Clearwater Township Board on the DEIS.[249]

250. On March 20, 2024, EERA filed a comment from the Renville County Board of Commissioners opposing the Blue Route.[250]

251. On March 20, 2024, EERA filed a comment from the Clearwater City Council stating its preference for the proposed route that crosses over Interstate 94 in Stearns County and follows CSAH 8 south to Becker.[251]

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[245] MDNR Comments (Feb. 21, 2024) (eDocket Nos. 20242-203694-01, 20242-203694-02, and 20242-203694-03); *see also* EERA-4 at Comment No. 285 (Public Scoping Comments); MDNR DEIS Comments (Nov. 26, 2024) (eDocket Nos. 202411-212410-01, 202411-212410-02, and 202411-212410-03).
[246] MnDOT Comments (Feb. 21, 2024) (eDocket No. 20242-203676-02); *see also* EERA-4 at Comment No. 312 (Public Scoping Comments); MnDOT Comments (Nov. 25, 2024) (eDocket No. 202411-212360-01).
[247] Ex. PUC-5 at 1 (Order accepting RP Application as Complete); Public Comments (Township of Harvey) (May 17, 2023) (eDocket No. 20235-195895-02); Public Comments (Meeker County) (Aug. 8, 2023) (eDocket No. 20238-198073-02).
[248] Public Comments (Wright County Board of Commissioners) (Feb. 28, 2024) (eDocket No. 20242-203898-01); *see also* EERA-4 at Comment No. 58 (Public Scoping Comments).
[249] EERA-4 at Comment No. 300 (Public Scoping Comments); Public Comments (Clearwater Township Board) (Nov. 25, 2024) (eDocket No. 202411-212392-01).
[250] EERA-4 at Comment No. 94 (Public Scoping Comments).
[251] EERA-4 at Comment No. 212 (Public Scoping Comments).

252. On March 20, 2024, EERA filed a comment from the Lake Lillian Township Board stating its preference that transmission lines be placed near roads.[252]

253. On November 19, 2024, the Commission filed a public comment from the Melville Township Board stating its preference that existing rights-of-way be used for the Project.[253]

VII. CERTIFICATE OF NEED CRITERIA

254. Minn. Stat. § 216B.243 identifies the criteria the Commission must evaluate when assessing the need for a large energy facility, which includes:

> (1) the accuracy of the long-range energy demand forecasts on which the necessity for the facility is based;
>
> (2) the effect of existing or possible energy conservation programs under Minn. Stat. §§ 216C.05 to 216C.30 and 216B.243 or other federal or state legislation on long-term energy demand;
>
> (3) in the case of a high-voltage transmission line, the relationship of the proposed line to regional energy needs, as presented in the transmission plan submitted under Minn. Stat. § 216B.2425;
>
> (4) promotional activities that may have given rise to the demand for this facility;
>
> (5) benefits of this facility, including its uses to protect or enhance environmental quality, and to increase reliability of energy supply in Minnesota and the region;
>
> (6) possible alternatives for satisfying the energy demand or transmission needs including but not limited to potential for increased efficiency and upgrading of existing energy generation and transmission facilities, load-management programs, and distributed generation;
>
> (7) the policies, rules, and regulations of other state and federal agencies and local governments;
>
> (8) any feasible combination of energy conservation improvements, required under Minn. Stat. § 216B.241, that can (i) replace part or all of the energy to be provided by the proposed facility, and (ii) compete with it economically;

[252] EERA-4 at Comment No. 286 (Public Scoping Comments).
[253] Public Comments (Melville Township Board) (Nov. 19, 2024) (eDocket No. 202411-212114-01).

(9) with respect to a high-voltage transmission line, the benefits of enhanced regional reliability, access, or deliverability to the extent these factors improve the robustness of the transmission system or lower costs for electric consumers in Minnesota;

(10) whether the applicant is in compliance with applicable provisions of Minn. Stat. §§ 216B.1691 and 216B.2425, subdivision 7, and has filed or will file by a date certain an application for certificate of need under Minn. Stat. § 216B.243 or for certification as a priority electric transmission project under Minn. Stat. § 216B.2425 for any transmission facilities or upgrades identified under Minn. Stat. § 216B.2425, subdivision 7;

(11) whether the applicant has made the demonstrations required under Minn. Stat. § 216B.243, subdivision 3a; and

(12) if the applicant is proposing a nonrenewable generating plant, the applicant's assessment of the risk of environmental costs and regulation on that proposed facility over the expected useful life of the plant, including a proposed means of allocating costs associated with that risk.[254]

255. Minn. R. 7849.0120 (2023) further provides that the Commission shall grant a certificate of need if it determines 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;

(2) the effects of the applicant's existing or expected conservation programs and state and federal conservation programs;

(3) the effects of promotional practices of the applicant that may have given rise to the increase in the energy demand, particularly promotional practices which have occurred since 1974;

(4) the ability of current facilities and planned facilities not requiring certificates of need to meet the future demand; and

[254] Minn. Stat. § 216B.243, subd. 3.

(5) the effect of the proposed facility, or a suitable modification thereof, in making efficient use of resources;

B. a more reasonable and prudent alternative to the proposed facility has not been demonstrated by a preponderance of the evidence on the record, considering:

(1) the appropriateness of the size, the type, and the timing of the proposed facility compared to those of reasonable alternatives;

(2) the cost of the proposed facility and the cost of energy to be supplied by the proposed facility compared to the costs of reasonable alternatives and the cost of energy that would be supplied by reasonable alternatives;

(3) the effects of the proposed facility upon the natural and socioeconomic environments compared to the effects of reasonable alternatives; and

(4) the expected reliability of the proposed facility compared to the expected reliability of reasonable alternatives;

C. by a preponderance of the evidence on the record, the proposed facility, or a suitable modification of the facility, will provide benefits to society in a manner compatible with protecting the natural and socioeconomic environments, including human health, considering:

(1) the relationship of the proposed facility, or a suitable modification thereof, to overall state energy needs;

(2) the effects of the proposed facility, or a suitable modification thereof, upon the natural and socioeconomic environments compared to the effects of not building the facility;

(3) the effects of the proposed facility, or a suitable modification thereof, in inducing future development; and

(4) the socially beneficial uses of the output of the proposed facility, or a suitable modification thereof, including its uses to protect or enhance environmental quality; and

D. the record does not demonstrate that the design, construction, or operation of the proposed facility, or a suitable modification of the facility, will fail to comply with relevant policies, rules, and regulations of other state and federal agencies and local governments.[255]

256. There is sufficient evidence in the record for the Administrative Law Judge to assess the Proposed Project and apply the criteria and factors set out above to make a recommendation to the Commission.[256]

VIII. APPLICATION OF CERTIFICATE OF NEED CRITERIA

A. The Project Meets the Requirements of Minn. Stat. § 216B.243, subd. 3 (1)-(9) (2024) and Minn. R. 7849.0120 (2023)

257. To a significant extent, factors that the Commission must consider pursuant to Minn. Stat. § 216B.243, subd. 3(1)-(9) are also reflected into the subitems of Minn. R. 7849.0120. Therefore, to improve clarity and readability, this portion of the Report is organized according to the subitems of the regulation. Where a statutory factor is not reflected in Minn. R. 7849.0120, the Findings below separate out those matters at the conclusion of this section.[257]

B. Adequacy, Reliability, and Efficiency of Energy Supply

258. Minn. R. 7849.0120(A) requires that "the probable result of denial [of a CN] 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. . . ."[258] In making this determination, the Commission is directed to evaluate the criteria detailed below.

i. Criteria (A)(1): Forecast Accuracy

259. Under Minn. R. 7849.0120(A)(1), the Commission must assess "the accuracy of the applicant's forecast of demand for the type of energy that would be supplied by the proposed facility."[259]

260. On April 15, 2022, the Commission issued the Integrated Resource Plan Order for Xcel Energy in Docket No. E-002/RP-19-368. The IRP Order required Xcel to acquire by 2026:

(a) Approximately 720 megawatts of company-owned solar-powered generators to fully reutilize the interconnection

[255] Minn. R. 7849.0120.
[256] *See* Sections XIII – X *infra*.
[257] Minn. R. 7849.0120.
[258] Minn. R. 7849.0120(A).
[259] Minn. R. 7849.0120(A)(1); *see also* Minn. Stat. § 216B.243, subd. 3(1) (requiring the Commission to evaluate "the accuracy of the long-range energy demand forecasts on which the necessity for the facility is based").

capacity to be made available following the retirement of the Sherco Unit 2—460 MW of which could come from the proposed Sherco Solar project if approved by the Commission—and

(b) An additional 600 MW of solar resources unconstrained by interconnection location or ownership.[260]

261. On November 7, 2022, in Docket No. E-002/M-20-891, the Commission issued an order approving the 460 MW Sherco Solar units 1 and 2 projects. The remaining capacity to re-use the interconnection rights of Sherco Coal unit 2 were acquired in Docket No. E-002/M-23-403 via the Sherco Solar unit 3 project.[261]

262. The IRP Order stated that Xcel has demonstrated that, between 2027 and 2032, the Applicant will need approximately 600 MW more solar-resources and 2,150 MW more wind resources, or an equivalent amount of energy and capacity from a combination of wind, solar and storage.[262]

263. The IRP Order stated that, "[i]n addition to the resources discussed in Ordering Paragraph 2, the Commission finds that it is more likely than not that there will be a need for approximately, but not more than, 800 MW of generic firm dispatchable resources between 2027 and 2029."[263]

264. Together, these features of the IRP Order require Xcel to pursue over five Gigawatts of new generation resources between 2026 and 2032.[264]

265. Chapter 4 of the CN Application provides "updates to the quantity of new generation needed based upon the updated demand and energy forecasting provided under Minnesota Rules 7849.0270." Images 4.1 and 4.2 of the CN Application show an update to the Applicant's energy and demand forecasts that were used in the IRP. Image 4.1 of the CN Application shows that the spring 2022 demand forecast is like the forecast actually used in the IRP until about 2032, after which the Spring 2022 demand forecast is significantly lower.[265]

266. Image 4.2 of the CN Application shows that the Spring 2022 energy forecast is also similar to the forecast actually used in the IRP until about 2032, after which the Spring 2022 energy forecast is significantly lower. Additionally, Table 4.2 shows Xcel Energy's accredited capacity situation for the years 2022 to 2032. Table 4.2 shows

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[260] IRP Order at 32.
[261] Order Approving Solar Project with Conditions, at 9 (eDocket No. 202211-190450-01).
[262] IRP Order at 31.
[263] *Id*.
[264] DER Comments at 7 (Sept. 6, 2024) (eDocket No. 20249-210008-01).
[265] CN Application at 45–48.

that Xcel Energy has an accredited capacity deficit of about 3.6 GW in 2032 before any new actions are taken.[266]

267. In addition to the forecast, the CN Application notes that MISO's resource adequacy construct is undergoing significant changes. MISO has already switched from an annual construct to a seasonal construct. MISO is also exploring new methods for accrediting resources.[267]

268. Given the relatively small change represented by the Spring 2022 demand and energy forecasts (until much later in the planning period), the forecasted 3.6 GW accredited capacity deficit, and the fact that MISO is fundamentally re-structuring its resource adequacy standards, DER did not update its forecasts of the Applicant's resources needs. DER determined that Xcel Energy's needs likely exceed the capability of the proposed Project, even if one assumed a lower forecast.[268]

269. MISO studies new generation projects in separate groups across several study areas. The MISO West Study Area includes new projects in Montana, North Dakota, South Dakota, Minnesota, Iowa, and western Wisconsin. One group is established each year for MISO West.[269]

270. During the 2019 IRP, DER analyzed new data on MISO's generation interconnection queue (GIQ) process. In August of 2024, DER updated portions of the IRP analysis with new data on Definitive Planning Phases (DPP) groups that were then underway and the most recently completed DPP groups. Data from the MISO West Study Area is sufficient to describe the timing issues faced by projects in MISO's GIQ process.[270]

271. The data included both the announced dates and the actual start dates for each DPP group. This data on actual starting dates illustrates the delays encountered by MISO in getting a particular DPP group started and the impacts of those delays on the transmission grid. Likewise important are comparisons between the date a DPP ground started and the estimated final dates to complete a generation interconnection agreement (GIA). This data illustrates the delays faced by MISO in processing a DPP group from the beginning to the end of the process.[271]

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[266] *Id*. at 48, 53.
[267] *Id.* at 44 and 54; DER Comments at 7 (Sept. 6, 2024) (eDocket No. 20249-210008-01); *see* MISO, Resource Accreditation White Paper Version 1.0 Draft (May 17, 2023), https://cdn.misoenergy.org/MISO%20Draft%20Resource%20Accreditation%20Design%20White%20Paper628865.pdf; *see also* MISO, Resource Accreditation White Paper Version 2.1 (March 28, 2024), https://cdn.misoenergy.org/MISO%20Draft%20Resource%20Accreditation%20Design%20White%20Paper628865.pdf.
[268] DER Comments at 8 (Sept. 6, 2024) (eDocket No. 20249-210008-01).
[269] *See* https://www.misoenergy.org/planning/resource-utilization/GI_Studies/#t=10&p=0&s=&sd=.
[270] DER Comments at 8 (Sept. 6, 2024) (eDocket No. 20249-210008-01).
[271] *Id.*

272. The minimum delay encountered, for DPP-2022-Cycle 1, is well over a calendar year.[272]

273. The 2017 (August), 2018, 2019, 2020, and 2021 DPP groups have all taken at least 3 years to move from the first estimated starting date to signing a GIA. If two years are needed for final permitting and construction of a project, then it would be reasonable to assume a five-year process for a particular project. This DPP group delay indicates that re-use of existing interconnection capability, and thereby avoid the MISO GIQ process backlog, is a valuable strategy to meet near-term energy needs.[273]

274. DER also obtained data on the capacity studied in each DPP group and the interconnection costs determined by the MISO studies.[274]

275. Since the IRP analysis was completed, MISO has approved a large group of new, high voltage transmission lines, referred to as LRTP Tranche 1. For the most part the LRTP Tranche 1 transmission is expected to be placed in-service by 2030. In addition, MISO appears to be near to seeking final approvals related to additional high voltage transmission lines via the MISO - Southwest Power Pool (SPP) Joint Targeted Interconnection Queue Study (JTIQ) and LRTP Tranche 2.1. The JTIQ transmission lines are specifically designed to enable interconnection of new generation near the MISO-SPP border. Therefore, MISO is making significant progress towards expanding the transmission grid to enable new generation interconnection.[275]

276. Overall, the updated analysis does not provide a basis to revise DER's earlier determination that Xcel Energy's Commission-approved plan may not be achievable within the MISO GIQ process due to continued delays for projects in the West Study Area and high interconnection costs for new generation projects.[276]

277. DER concluded that Xcel Energy satisfied the criteria listed in Minn. R. 7849.0120(A)(1).[277]

278. The Administrative Law Judge finds that the Applicant's forecast of demand for the type of energy that would be supplied by the proposed facility is reasonable, accurate, and demonstrates the need for the Project.[278]

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[272] *Id.*
[273] *Id.* at 9.
[274] *Id.*
[275] *Id.* at 10.
[276] *Id.*
[277] *Id.*
[278] *See* Minn. Stat. § 216B.243, subd. 3(1); Minn. R. 7849.0120(A)(1).

ii. Criteria (A)(2): Effects of Applicant's Conservation Programs and State and Federal Conservation Programs

279. Under Minn. R. 7849.0120(A)(2), the Commission must assess "the effects of the applicant's existing or expected conservation programs and state and federal conservation programs."[279]

280. Regarding this criterion, Xcel Energy has stated that "[t]he Project is needed to interconnect generation resources that will replace the capacity and energy of Sherco Units 1 and 3" and that conservation and demand-side management cannot supplant those energy needs.[280]

281. DER notes that energy efficiency (EE) and demand response (DR) strategies were reflected in its calculation of the quantity of new supply-side resources needed by Xcel Energy. Specifically, the Commission has required Xcel Energy to save at least 780 GWh annually via EE and acquire 400 MW of incremental DR by 2023.[281]

282. Chapter 4 of Xcel Energy's Application to the Minnesota Public Utilities Commission for a Certificate of Need for the Minnesota Energy Connection Project (CN Application) discusses the Applicant's updated forecast of energy and demand requirements. After accounting for increased levels of DSM that were mandated by the Commission in Xcel's IRP, the updated 2022 load forecast resulted in "a larger incremental resource need than the Applicant had anticipated in the IRP."[282]

283. Image 4.2 of the CN Application shows the Applicant's original IRP energy forecast, the energy forecast updated for Commission-ordered EE, and the Spring 2022 energy forecast. As with the demand forecast, the Spring 2022 energy forecast is higher than the IRP energy forecast, even after forecast changes from conservation.[283]

284. Based upon the data in the CN Application, DER concluded that given the scale of the forecasted energy needs, reasonable and foreseeable changes in EE and DR will not obviate the need to re-use the Sherco interconnection.[284]

285. DER concluded that Xcel Energy satisfied the criteria listed in Minn. R. 7849.0120(A)(2).[285]

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[279] Minn. R. 7849.0120(A)(2); *see also* Minn. Stat. § 216B.243, subd. 3(2) (requiring the Commission to evaluate "the effect of existing or possible energy conservation programs under sections 216C.05 to 216C.30 and this section or other federal or state legislation on long-term energy demand"). Minn. Stat. § 216B.243, subd. 3(8), requires the Commission to evaluate "any feasible combination of energy conservation improvements, required under section 216B.241, that can (i) replace part or all of the energy to be provided by the proposed facility and, (ii) compete with it economically."

[280] CN Application at 75.

[281] DER Comments at 11 (Sept. 6, 2024) (eDocket No. 20249-210008-01).

[282] *Id.*

[283] *Id.*

[284] *Id.*

[285] *Id.* at 32.

286. The Administrative Law Judge concurs. Demand response, demand management, and conservation programs cannot meet the need fulfilled by the Project.[286]

iii. Criteria (A)(3): Effects of Promotional Activities

287. Under Minn. R. 7849.0120(A)(3), the Commission must assess "the effects of promotional practices of the applicant that may have given rise to the increase in the energy demand, particularly promotional practices which have occurred since 1974."[287]

288. The CN Application states that "Xcel Energy has not conducted any promotional activities or events that have triggered the need for the Project." It argues that the Project is needed to meet existing energy needs, irrespective of the future growth, and permits the Applicant to reuse the interconnection rights connected to Sherco Units 1 and 3.[288]

289. Xcel Energy's Spring 2022 forecast is calling for "approximately - 0.2% growth over the full 2022-2034 planning period." Thus, the demand forecast shows essentially no growth, and the energy forecast shows a reduction in requirements.[289]

290. Based upon this information, the DER concluded that promotional practices of Xcel Energy did not give rise to the needs identified in this proceeding.[290]

291. DER concluded that Xcel Energy satisfied the criteria listed in Minnesota Rules 7849.0120(A)(3).[291]

292. The Administrative Law Judge concurs. There is no evidence in the record that the Applicant's promotional practices created the need for the Project.[292]

iv. Criteria (A)(4): Ability of Current and Future Facilities Not Requiring Certificates of Need to Meet Demand

293. Under Minn. R. 7849.0120(A)(4), the Commission must assess "the ability of current facilities and planned facilities not requiring certificates of need to meet the future demand."[293]

294. Regarding this requirement, DER commented that it is not possible that current facilities and planned facilities not requiring a CN could meet the identified need. All of Xcel Energy's current generation facilities were considered in the EnCompass modeling that formed the basis for the Commission's determination that more than

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[286] *See* Minn. R 7849.0120(A)(2).
[287] Minn. R. 7849.0120(A)(3); *see also* Minn. Stat. § 216B.243, subd. 3(4) (requiring the Commission to evaluate "promotional activities that may have given rise to the demand for this facility").
[288] CN Application at 21.
[289] DER Comments at 12 (Sept. 6, 2024) (eDocket No. 20249-210008-01); *see also* CN Application at 45.
[290] DER Comments at 12 (Sept. 6, 2024) (eDocket No. 20249-210008-01).
[291] *Id.* at 33.
[292] *See* Minn. R 7849.0120(A)(3).
[293] Minn. R. 7849.0120(A)(4).

five GW of new generation was needed by Xcel Energy. In addition, all of Xcel Energy's planned generation facilities were included in the EnCompass modeling.[294]

295. Based upon this analysis, DER concluded that current facilities and planned facilities not requiring a CN will be unable to meet the identified need.[295]

296. DER concluded that Xcel Energy satisfied the criteria listed in Minn. R. 7849.0120(A)(4).[296]

297. The Administrative Law Judge concurs. The no evidence in the record that demonstrates that current or planned generation sources, or transmission alternatives that do not require a CN, are capable of meeting the identified needs.[297]

v. Criteria (A)(5): Effect of Proposed Facility on Efficient Use of Resources

298. Under Minn. R. 7849.0120(A)(5), the Commission must assess "the effect of the proposed facility, or a suitable modification thereof, in making efficient use of resources."[298]

299. The CN Application asserts that the proposed Project is needed to enable the Applicant to reuse valuable interconnection rights at the Sherco site after the coal-generating units retire.[299]

300. DER has noted that the proposed Project will enable the Applicant to use the interconnection rights at Sherco while simultaneously using the wind and solar resources in Lyon County and potentially at a variety of sites along the line. The proposed Project would enable Xcel to make efficient use of transmission rights and the states' wind and solar resources.[300]

301. DER concluded that Xcel Energy satisfied the criteria listed in Minn. R. 7849.0120(A)(5).[301]

302. The Administrative Law Judge concurs. The Project would make efficient use of existing interconnection rights and the states' wind and solar resources.[302]

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[294] DER Comments at 12 (Sept. 6, 2024) (eDocket No. 20249-210008-01).
[295] *Id.*
[296] *Id.* at 33.
[297] Minn. R. 7849.0120(A)(4).
[298] Minn. R. 7849.0120(A)(5).
[299] CN Application at 14.
[300] DER Comments at 12 (Sept. 6, 2024) (eDocket No. 20249-210008-01).
[301] *Id.* at 33.
[302] Minn. R. 7849.0120(A)(5).

C. Absence of Superior Alternatives

303. Minn. Stat. § 216B.243, subd. 3(6) (2024), directs the Commission to evaluate "possible alternatives for satisfying the energy demand or transmission needs including but not limited to the potential for increased efficiency and upgrading of existing energy generation and transmission facilities, load-management programs, and distributed generation." Further, Minn. R. 7849.0120(B) requires the Commission to consider whether "a more reasonable and prudent alternative to the proposed facility has not been demonstrated by a preponderance of the evidence on the record" and directs the Commission to consider four factors in making its evaluation.[303]

i. Criteria (B)(1): Appropriateness of the Size and Type of Facility

304. Additionally, Minn. Stat. § 216B.2426 (2024) requires that with respect to the range of "reasonable alternatives" to the proposed project:

> the Commission shall ensure that opportunities for the installation of distributed generation, as that term is defined in section 216B.169, subdivision 1, paragraph (c), are considered in any proceeding under section . . . 216B.243 [Certificate of Need for Large Energy Facilities].[304]

305. Further, Minn. Stat. § 216B.2422 (2024) requires that:

> the Commission shall not approve a new or refurbished nonrenewable energy facility in an integrated resource plan or a certificate of need, pursuant to section 216B.243, nor shall the Commission allow rate recovery pursuant to section 216B.16 for such a nonrenewable energy facility, unless that utility has demonstrated that a renewable energy facility is not in the public interest.[305]

306. When considering the "size" of a proposed facility, and appropriate alternatives, DER interprets the Commission's use of the term "size" in Minn. R. 7849.0120(B)(1), as referring to "the quantity of power transfers that the transmission infrastructure improvement enables."[306]

307. The identified need is to connect new, renewable sources of energy to the Sherco Point of Interconnection (POI). In order to deliver 1,996 MW of energy to the Sherco POI, the transmission facilities must be capable of transferring the entirety of the needed energy on one or two lines utilizing a minimum of 3,000-amp substation equipment. The necessary capacity at 3,000 amps can only be provided by voltages of

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[303] Minn. Stat. § 216B.243, subd. 3(6); Minn. R. 7849.0120(B).
[304] Minn. Stat. § 216B.2426.
[305] Minn. Stat. § 216B.2426, subd. 4 (2024).
[306] DER Comments at 14 (Sept. 6, 2024) (eDocket No. 20249-210008-01).

230 kV and higher. Therefore, Xcel Energy determined that lower voltage 69 kV and 115 kV facilities would not meet the stated need.[307]

308. Xcel Energy also evaluated and screened a 230 kV option, but that approach would require the equipment to operate at thermal operating limits in order to reach 3,000 amps with two lines. Energy losses on a 230 kV alternative would be more than double a comparable 345 kV option. Further, because of line impedance over the distance between Sherco and Lyon County, a 230 kV system would be unstable. The impedance of a 230 kV line is greater than a 345 kV line. Using the same conductor, a 230 kV single circuit line has 225 percent higher impedance than a single circuit 345 kV line. Additionally, 230 kV lines would require four 230 kV/345 kV transformers to convert the voltage before linking to the Sherco POI.[308]

309. For higher voltages, Xcel Energy analyzed a single circuit 500 kV line alternative – known as "Option 10." The analysis showed that while a single circuit 500 kV line could transfer a large amount of power, it did not perform as well as the 345 kV/345 kV – known as Option 9. The single circuit 500 kV line could transfer up to 1,900 MW before the system would become unstable. It would also be more costly. For comparison, a single circuit 500 kV line would generally cost approximately $4.1 million per mile and require four 500 kV/345 kV transformers at Sherco (costing an additional $75 million). A double circuit 500 kV line would be able to carry the same, or more energy than Option 9, but would cost approximately $4.5 million to $5 million per mile. In contrast, the estimated cost for a 345 kV/345 kV line is approximately $3.5 million per mile.[309]

310. Xcel Energy determined that the 500 kV option was not preferred because:

- Using 3,000-amp substation equipment, the thermal rating of a double circuit 345 kV line (3,581 megavolt amperes (MVA)) is higher than a single circuit 500 kV line (2,595 MVA).

- Using the same conductor, the impedance of a double circuit 345 kV line is only 5 percent higher than a single circuit 500 kV line.[310]

311. While there are two 500 kV facilities operating in Minnesota, neither is located in southwest Minnesota.[311]

312. Based on its review of the CN Application, DER concluded that the size of the proposed Project is reasonable. DER also concluded that potential generation alternatives do not meet the claimed need for the Project. Moreover, upgrading existing

[307] CN Application at 71-72.
[308] *Id.* at 72.
[309] *Id.*
[310] *Id.*
[311] *Id.* at 72–73.

transmission lines or generation facilities cannot meet the identified need as they do not allow for new generation to be interconnected to the Sherco Substation POI.[312]

313. DER interprets the term "type" in Minn. R. 7849.0120(B)(1), as referring to "the transformer nominal voltages, rated capacity, surge impedance loading (SIL), and nature [alternating current or direct current] of power transported."[313]

314. DER maintains that 345 kV is the standard high voltage used in Minnesota for long-distance transmission projects. Over the past two decades, several 345 kV projects have been approved by the Commission and constructed.[314]

315. DER agrees with Xcel Energy's decision to disregard from consideration higher voltages.[315]

316. Regarding the nature of transport, neither AC or HVDC underground transmission are feasible or reasonable alternatives to the proposed project.[316]

317. As detailed in the CN Application, while HVDC cable systems can be used for underground lines of 100 miles or more and have much lower line losses compared to high voltage AC when using comparable conductor, these systems "require converter stations on each end of the line to convert the voltage from DC to AC and AC to DC." Xcel Energy estimates the cost for underground HVDC over 100 miles at $25 million or more per mile – construction costs for underground high voltage AC systems are estimated to be similar – making this alternative considerably more expensive than the preferred Option 9a at $3.8 million per mile.[317]

318. DER agrees with Xcel Energy's conclusion that underground transmission should not be considered and the proposed type is reasonable.[318]

319. The Administrative Law Judge concurs. The Applicant reasonably considered lower voltage, higher voltage, AC, and HVDC underground transmission alternatives. Further, the Applicant and MISO examined every feasible alternative to the Project, including a no-build alternative, and found no superior solution to address transmission line congestion in southern Minnesota. A more reasonable and prudent alternative to the Project has not been demonstrated by a preponderance of the evidence on the record.[319]

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[312] DER Comments at 14 (Sept. 6, 2024) (eDocket No. 20249-210008-01).
[313] *Id.* at 14–15.
[314] *Id.* at 15.
[315] CN Application at 73.
[316] DER Comments at 17 (Sept. 6, 2024) (eDocket No. 20249-210008-01).
[317] CN Application at 74-75.
[318] DER Comments at 18 (Sept. 6, 2024) (eDocket No. 20249-210008-01).
[319] *Id.* at 14–19; CN Application at 71-75.

ii. Criteria (B)(2): Cost of Proposed Facility and the Cost of Energy to be Supplied

320. Under Minn. R. 7849.0120(B)(2), the Commission must assess "the cost of the proposed facility and the cost of energy to be supplied by the proposed facility compared to the costs of reasonable alternatives and the cost of energy that would be supplied by reasonable alternatives."[320]

321. DER concluded that the size, type and timing analyses show that the most realistic alternative is a double-circuit 345 kV line. The total cost of the Project at $1.139 billion and a transmission line cost of approximately $3.8 million per mile in 2023 dollars.[321]

322. For comparison, the CN Application presents the cost of a single-circuit 500 kV alternative at approximately $4.1 million per mile (in 2023 dollars), and that of a double-circuit 500 kV alternative at approximately $4.5 million to $5 million per mile (in 2023 dollars). In the case of a single-circuit 500 kV line, four 500 kV/345 kV transformers are required, costing an additional $75 million. Assuming a single-circuit 500 kV line is built — instead of a double-circuit 345 kV line — there is an estimated $129,000,000 (in 2023 dollars) difference in capital costs.[322]

323. In total, the CN Application presents ten options and two sub options—options 9a and 9b. Options 1 to 9, 9a, and 9b involve a 345 kV line while option 10 includes a 500 kV line. The options deliver from 663 MW to 2,396 MW (after accounting for losses). The identified need is to deliver at least 1,996 MW of energy to the Sherco Substation POI. Options 1 to 5, single-circuit 345 kV, deliver from 663 MW to 1,500 MW, and so do not meet the identified need. Similarly, options 6 and 7 (double-circuit 345 kV), and option 10 (single-circuit 500 kV), do not meet the identified need. These options deliver from 1,142 MW to 1,763 MW. Only options 8, 9, 9a, and 9b meet the identified need of delivering at least 1,996 MW.[323]

324. For the purpose of comparing costs in 2023 dollars, Options 8 and 9 were estimated at $840 million, Option 9a was estimated at $930 million, and Option 9b was estimated at $970 million. These costs are exclusive of allowances for funds used during construction (AFUDC) and contingencies. Although Options 8 and 9 have lower costs, Xcel Energy prefers Options 9a and 9b to Options 8 and 9.[324]

325. To interconnect at least 1,996 MW, Options 8, 9, 9a and 9b each use two 345 kV transmission lines, two synchronous condensers and a voltage support substation located in the mid-point of the line. Xcel Energy prefers Option 9a and 9b over Option 8 and Option 9. Options 9a and 9b include STATCOMs to address potential turbine interaction issues from the amount of wind generation, the high levels of series

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[320] Minn. R. 7849.0120(B)(2).
[321] CN Application at 75; Comments at 18 (DER) (Sept. 6, 2024) (eDocket No. 20249-210008-01).
[322] DER Comments at 18 (Sept. 6, 2024) (eDocket No. 20249-210008-01).
[323] *Id.*
[324] *Id.*

compensation and radial nature of the Project. Based upon current wind turbine technology, STATCOMs are a recognized means of mitigating potential resonant frequency interactions associated with long radial lines.[325]

326. Between Options 9a and 9b, Option 9a provides 155 MW more interconnection capacity (2,182 MW v. 2,027 MW) and does so at a lower cost.[326]

327. DER agrees with the Applicant that Option 9a is a superior option.[327]

328. With respect to Project costs, Xcel Energy requested that the Commission include a condition that requires Xcel Energy to do the following:

1. provide a final number or cap amount within 90 days of the Commission's Order determining the route;

2. fully justify the reasonableness of recovering any cost overruns of the proposed Project from Minnesota ratepayers – including operations-and-management expense; ongoing capital expense; revenue requirements related to capital included in rate base; insurance expense land-lease expense; and property/production tax expense.

3. place the burden of proof in any future regulatory proceeding related to the recovery of costs above those forecasted in this proceeding upon Xcel Energy; and

4. wait until the first rate case after the proposed Project is placed into service before Xcel Energy may recover any cost overruns from Minnesota ratepayers.[328]

329. DER agreed with Xcel Energy's proposed cost condition, including the requested 90 days.[329]

330. The Administrative Law Judge concurs. The cost of the Project compares favorably to other alternatives considered and the cost condition detailed above is reasonable and supported by the record.[330]

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[325] CN Application at 76.
[326] *Id.*
[327] *Id.*
[328] Applicant's Comments at 9–10 (Sept. 6, 2024) (eDocket No. 20249-210022-02).
[329] DER Reply Comments on CN Application at 5 (Oct. 8, 2024) (eDocket No. 202410-210797-01).
[330] *Id.*

iii. Criteria (B)(3): Effects of Facility on Natural and Socioeconomic Environment

331. Under Minn. R. 7849.0120(B)(3), the Commission must assess "the effect of the proposed facility upon the natural and socioeconomic environments compared to the effects of reasonable alternatives."[331]

332. Xcel Energy asserts that the approved IRP, including the Project, achieves substantially more carbon reduction than alternatives that do not include the Project.[332]

333. DER in Department Information Request No. 8 requested that Xcel Energy provide a calculation of the CO_2 emissions for the proposed Project and for the no-build alternative, considering in both cases the approved Resource Plan. In response, Xcel Energy provided a table showing the CO_2 emissions from the Alternate Plan compared to Scenario 9 (Supplement Preferred Plan) and Scenario 1 (Reference Case).[333]

334. Based upon the estimates provided, DER concluded that the "Alternate Plan" — the approved Resource Plan, including the Project—results in an estimated reduction on the amount of CO_2 emissions of 11,678,213 tons compared to the "Scenario 9 (Supplement Preferred Plan)." Notably, the estimated reduction resulting from building the Project is greater than the emissions reduction resulting from following "Scenario 9 (Supplement Preferred Plan)" instead of "Scenario 1 (Reply)." The alternative scenario to the Resource Plan reduces CO_2 by 8,734,935 tons.[334]

335. Based upon this analysis, DER concluded that Xcel Energy's estimated CO_2 reduction has a substantial (and beneficial) impact upon the natural environment.[335]

336. The environmental review prepared by EERA for the Project likewise compared the effects of the proposed facility upon the natural and socioeconomic environments with the effects of reasonable alternatives. The EERA analysis is detailed below in later sections of these Findings.[336]

337. Based upon the environmental analysis in this record, a more reasonable and prudent alternative to the Project has not been demonstrated by a preponderance of the evidence on the record.[337]

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[331] Minn. R. 7849.0120(B)(3).
[332] CN Application at 20.
[333] DER Comments at 19 (Sept. 6, 2024) (eDocket No. 20249-210008-01).
[334] *Id.* at 20.
[335] *Id.*
[336] *See* Section X *infra*.
[337] *See* DER Comments at 21 (Sept. 6, 2024) (eDocket No. 20249-210008-01).

iv. Criteria (B)(4): Reliability of the Project

338. Under Minn. R. 7849.0120(B)(4), the Commission must assess "the expected reliability of the proposed facility compared to the expected reliability of reasonable alternatives."[338]

339. The identified need is to connect at least 1,996 MW of generation to the Sherco POI. Only options 8, 9, 9a, and 9b meet the identified need. As noted above, Xcel Energy prefers Options 9a and 9b to Options 8 and 9, because those options include STATSCOMs.[339]

340. Xcel Energy considered several other alternatives to meet the need, including generation, demand-side management, non-CN alternatives, DC lines, and a no-build alternative. None of those alternatives is a suitable replacement for the value and performance of Option 9a – a double-circuit 345 kV line with voltage support technology, that relieves congestion in the grid, and re-purposes available interconnection rights.[340]

341. DER agrees. As to reliability, it concluded that the alternatives to the proposed Project would result in either equivalent or lesser reliability.[341]

342. The record demonstrates that the Project's reliability compares favorably to the reliability of alternatives within the record.[342]

D. Protection of Natural and Socioeconomic Environments and Human Health

343. In considering whether a CN must be granted to the Applicant, the Commission must consider the effects of the proposed facility on natural and socioeconomic environments compared to the effects of reasonable alternatives.[343]

i. Criteria (C)(1): Relationship of Facility to Overall State Energy Needs

344. Under Minn. R. 7849.0120(C)(1), the Commission must assess "the relationship of the proposed facility, or a suitable modification thereof, to overall state energy needs."[344]

345. Key benefits of the proposed Project include:

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[338] Minn. R. 7849.0120(B)(4).
[339] DER Comments at 20 (Sept. 6, 2024) (eDocket No. 20249-210008-01).
[340] *Id.*
[341] *Id.*
[342] *Id.*
[343] *See* Minn. R. 7849.0120(A).
[344] Minn. R. 7849.0120(C)(1).

(a) addressing current energy needs outside of the over-burdened MISO GIQ process;

(b) facilitating the prompt replacement of energy generation from coal with energy generation from renewable sources;

(c) additional progress towards the carbon-free energy goals in Minn. Stat. § 216B.1691 subd. 2g; and,

(d) mitigating some of the projected 3.6 GW deficit in Xcel Energy's accredited capacity.[345]

346. DER concluded that it would be more difficult for Xcel Energy to provide reliable and cost-effective service without the proposed Project.[346]

ii. Criteria (C)(2): Effects on Natural and Socioeconomic Environment

347. Under Minn. R. 7849.0120(C)(2), the Commission must assess "the effects of the proposed facility, or a suitable modification thereof, upon the natural and socioeconomic environments compared to the effects of not building the facility."[347]

348. DER recommended that the Commission consider the environmental review filed by EERA in this matter.[348]

349. In addition to the system alternatives considered for a proposed new HVTL required by Minn. R. 7849.1500 (2023), EERA identified the following system alternatives during scoping process and included them in its scoping decision:

- Construct an underground transmission line;
- Construct a new nuclear plant or natural gas plant at the site of the retired Sherco coal-fired generator and interconnect the new plant into the existing Sherco Substation;
- Construct a new nuclear plant or natural gas plant closer to the Minneapolis-St. Paul metropolitan area and interconnect into the existing Sherco Substation; and

[345] CN Application at 53.
[346] DER Comments at 21–22 (Sept. 6, 2024) (eDocket No. 20249-210008-01).
[347] Minn. R. 7849.0120(C)(2).
[348] DER Comments at 23 (Sept. 6, 2024) (eDocket No. 20249-210008-01).

- Construct wind and solar generation closer to the Minneapolis-St. Paul metropolitan area and interconnect into the existing Sherco Substation.[349]

350. The EIS excluded the following set of system alternatives because none of them could meet the underlying need for or purpose of the project: demand side management; purchased power; and energy generation from different sources.[350]

351. The EIS also excluded the following system alternatives because they were not feasible or available: an underground HVTL; upgrading the retiring Sherco coal-fired generator; replacing coal-fired generation at Sherco with additional solar or wind powered generation at the same site; replacing the coal-fired generating plant at Sherco with nuclear generation.[351]

352. The EIS includes analyses of the potential human and environmental impacts from the following system alternatives:

- the no-build alternative;
- HVTLs of a different size (a double circuit 500 kV transmission line);
- replacing coal-fired generation at Sherco with a new natural gas generation facility closer to Sherco and the Minneapolis – St. Paul metropolitan area, that interconnects to the Sherco Substation; and
- replacing coal-fired generation at Sherco with additional solar and wind powered generation closer to Sherco and the Minneapolis – St. Paul metropolitan area, that interconnects to the Sherco Substation.[352]

353. As noted above, DER concluded that the "Alternate Plan" (the approved Resource Plan, including the Project) reduces CO_2 emissions more than "Scenario 9 (Supplement Preferred Plan).[353]

354. Minnesota's state energy policy prefers carbon-free electricity generation sources to electricity generation from non-renewable sources. The increased supply of wind and solar energy from the Project will allow Xcel Energy to retire coal generation facilities. These retirements will help reduce harmful emissions of CO_2 by more than 85 percent over 2005 levels and places Xcel on track to deliver 80 percent of customers' electricity from carbon-free energy sources by 2030.[354]

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[349] Ex. EERA-12 at 5 (DEIS); FEIS at 5; Ex. EERA-9 (EIS Scoping Decision).
[350] Ex. EERA-12 at 5–6 (DEIS); FEIS at 5-6.
[351] Ex. EERA-12 at 5–6 (DEIS); FEIS at 5-6.
[352] Ex. EERA-12 at 6 (DEIS); FEIS at 6.
[353] DER Comments at 20 (Sept. 6, 2024) (eDocket No. 20249-210008-01).
[354] CN Application at 37–40.

355. Comments submitted by LIUNA, IUOE Local 49 and NCSRCC point to promising socioeconomic benefits from the Project.[355]

356. The record demonstrates that the natural and socioeconomic impacts of the Project compare favorably to the effects of not building the Project and to other system alternatives studied in the EIS. None of those system alternatives meets the need for interconnecting 1,996 MW of renewable generation at Sherco.[356]

iii. Criteria (C)(3): Effects on Inducing Future Development

357. Under Minn. R. 7849.0120(C)(3), the Commission must assess "the effects of the proposed facility, or a suitable modification thereof, in inducing future development."[357]

358. The hearing record supports the conclusion that the Project will serve projected increases in wind and solar generation from southern and southwestern Minnesota.[358] This factor supports the issuance of a Certificate of Need.

iv. Criteria (C)(4): Socially Beneficial Uses of Output

359. Under Minn. R. 7849.0120(C)(4), the Commission must assess "the socially beneficial uses of the output of the proposed facility or a suitable modification thereof, including its uses to protect or enhance environmental quality."[359]

360. Minnesota's state energy policies encourage the development of carbon--free electricity generation over new, non-renewable sources of electricity generation. The increased supply of wind and solar energy from the Project will support the retirement of coal generation facilities. Retiring those generation facilities will help reduce harmful emissions of CO_2 by more than 85%, when compared to 2005 levels, and aid Xcel Energy's plan to deliver at least 80% of customers' electricity from carbon-free energy sources by 2030.[360]

361. The enhancements to environmental quality that follow from substituting carbon-free generation, for coal generation, supports issuance of a Certificate of Need.[361]

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[355] *See,* e.g., Public Comments (LIUNA) (Sept. 6, 2024) (eDocket No. 20249-210030-01); Public Comments (IUOE Local 49 and NCSRCC) (Oct. 10, 2024) (eDocket No. 202410-210800-01).
[356] DER Comments at 27, 31-33 (Sept. 6, 2024) (eDocket No. 20249-210008-01).
[357] Minn. R. 7849.0120(C)(3); *see also* Minn. Stat. § 216B.243, subd. 3(3) (the Commission must evaluate "the relationship of the proposed line to regional energy needs, as presented in the transmission plan submitted under section 216B.2425").
[358] CN Application at 5.
[359] Minn. R. 7849.0120(C)(4).
[360] CN Application at 37–40.
[361] *Id*.

E. Compliance with Laws

362. Under Minn. R. 7849.0120(D), the Commission must assess whether "the design, construction, or operation of the proposed facility, or a suitable modification of the facility, will fail to comply with relevant policies, rules, and regulations of other state and federal agencies and local governments." [362]

363. Both the CN Application and the EIS identified the permits and approvals that will be required for the Project.[363]

364. There is no evidence in the record that Xcel Energy will be unable to obtain or comply with these permits and approvals.[364]

F. Analysis Under Minn. Stat. § 216B.243, subd. (3)(10) through 3(12) and subd. 3a

365. Minn. Stat. § 216B.243, subds. 3(10)-(12) (2024) requires the Commission to evaluate:

> (10) whether the applicant or applicants are in compliance with applicable provisions of sections 216B.1691 [renewable energy objectives] and 216B.2425, subdivision 7 [transmission needed to support renewable resources], and have filed or will file by a date certain an application for certificate of need under this section or for certification as a priority electric transmission project under section 216B.2425 for any transmission facilities or upgrades identified under section 216B.2425, subdivision 7
>
> (11) whether the applicant has made the demonstrations required under [Minn. Stat. § 216B.243] subdivision 3a; and,
>
> (12) if the applicant is proposing a nonrenewable generating plant, the applicant's assessment of the risk of environmental costs and regulation on that proposed facility over the expected useful life of the plant, including a proposed means of allocating costs associated with that risk.[365]

366. With respect to the standards of paragraph 10 above, the Commission has found the Applicant's certificate of need petition, as supplemented by Xcel Energy's reply

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[362] Minn. R. 7849.0120(D).
[363] *See* CN Application at 142, Table 8.13; Ex. EERA-12 at 29–31, Tables 2-1, 2-2, and 2-3 (DEIS); FEIS at 29-31, Tables 2-1, 2-2 and 2-3.
[364] *See* CN Application at 142, Table 8.13; Ex. EERA-12 at 29–31, Tables 2-1, 2-2, and 2-3 (DEIS); FEIS at 29-31, Tables 2-1, 2-2 and 2-3.
[365] Minn. Stat. § 216B.243, subd. 3(10)-(12).

comments, to be complete.[366] Further, the Project satisfies the renewable energy purposes of Minn. Stat. §§ 216B.1691 and 216B.2425, subd. 7 (2024).

367. With respect to the standard in paragraph 11 above, those requirements do not apply in this case. Minn. Stat. § 216B.243, subd. 3a (2024) limits the ability of the Commission to grant a certificate of need for either a large nonrenewable generation project or a transmission line for transporting power generated by nonrenewable resources. Here, however, the principal objective and effect of the Project is to enable customers to access wind and solar energy; and not non-renewable sources of energy.[367]

368. Similarly, with respect to the standard in paragraph 12 above, those requirements do not apply in this case. Minn. Stat. § 216B.243, subd. 3(12) applies only when an applicant is proposing a nonrenewable generating plant. The Project is not a nonrenewable generating plant.[368]

IX. FACTORS FOR A ROUTE PERMIT

369. The Power Plant Siting Act (PPSA), Minn. Stat. Ch. 216E, requires that route permit determinations "be guided by the state's goal to conserve resources, minimize environmental impacts, minimize human settlement and other land use conflicts, and ensure the state's electric energy security through efficient, cost-effective power supply and electric transmission infrastructure."[369]

370. During the 2024 legislative session, the Minnesota Legislature revised and recodified the PPSA in Chapter 216I. However, those revisions are not effective until July 1, 2025.[370]

371. Under the current PPSA, the Commission must be guided by the following considerations:

> (1) evaluation of research and investigations relating to: (i) large energy infrastructure facilities' effects on land, water, and air resources; and (ii) the effects water and air discharges and electric and magnetic fields resulting from large energy infrastructure facilities have on public health and welfare, vegetation, animals, materials, and aesthetic values, including baseline studies, predictive modeling, and evaluating new or improved methods to minimize adverse impacts of water and air discharges and other matters pertaining to large energy

[366] Order (May 2, 2023) (eDocket No. 20235-195506-01).
[367] *See generally* DER Comments at 25 (Sept. 6, 2024) (eDocket No. 20249-210008-01) ("while the Project cannot be substituted for by generation alone, it has the potential to connect a quantity of renewable-generated energy greater than that required to reuse the existing interconnection rights").
[368] *See id*.
[369] Minn. Stat. § 216E.03, subd. 7.
[370] 2024 Minn. Laws ch. 126, Art. 7, §§ 14 – 16.

infrastructure facilities' effects on the water and air environment;

(2) environmental evaluation of sites and routes that are proposed for future development and expansion, and the relationship of proposed sites and routes for future development and expansion to Minnesota's land, water, air, and human resources;

(3) evaluation of the new electric power generation and transmission technologies and systems related to power plants designed to minimize adverse environmental effects;

(4) evaluation of the potential for beneficial uses of waste energy from proposed large electric power generation plants;

(5) analysis of the direct and indirect economic impact of proposed sites and routes, including but not limited to productive agricultural land lost or impaired;

(6) evaluation of adverse direct and indirect environmental effects that are unavoidable should the proposed site and route be accepted;

(7) evaluation of alternatives to the applicant's proposed site or route;

(8) evaluation of potential routes that would use or parallel existing railroad and highway rights-of-way;

(9) evaluation of governmental survey lines and other natural division lines of agricultural land to minimize interference with agricultural operations;

(10) evaluation of the future needs for large energy infrastructure facilities in the same general area as any proposed site or route;

(11) evaluation of irreversible and irretrievable commitments of resources if the proposed site or route is approved; and,

(12) when appropriate, consideration of the potential impacts raised by other state and federal agencies and local entities.[371]

[371] Minn. Stat. § 216E.03, subd. 7(b)(1)-(12) (2022). Factor 4 is not applicable because the proposed Project does not include a “large electric power generating plant.”

372. Moreover, Minn. Stat. § 216E.03, subd. 7(e) (2022) provides that the Commission "must make specific findings that it has considered locating a route for a high-voltage transmission line on an existing high-voltage transmission line route and the use of parallel existing highway right-of-way and, to the extent those are not used for the route, the [C]omission must state the reasons."[372]

373. In addition to the PPSA, the Commission is governed by Minn. R. 7850.4100 (2023), which mandates consideration of the following factors when determining whether to issue a route permit for a high voltage transmission line:

A. effects on human settlement, including, but not limited to, displacement, noise, aesthetics, cultural values, recreation, and public services;

B. effects on public health and safety;

C. effects on land-based economies, including, but not limited to, agriculture, forestry, tourism, and mining;

D. effects on archaeological and historic resources;

E. effects on the natural environment, including effects on air and water quality resources and flora and fauna;

F. effects on rare and unique natural resources;

G. application of design options that maximize energy efficiencies, mitigate adverse environmental effects, and could accommodate expansion of transmission or generating capacity;

H. use or paralleling of existing rights-of-way, survey lines, natural division lines, and agricultural field boundaries;

I. use of existing large electric power generating plant sites;

J. use of existing transportation, pipeline, and electrical transmission systems or rights-of-way;

K. electrical system reliability;

L. costs of constructing, operating, and maintaining the facility which are dependent on design and route;

[372] Minn. Stat. § 216E.03, subd. 7(e).

M. adverse human and natural environmental effects which cannot be avoided; and

N. irreversible and irretrievable commitments of resources.[373]

374. There is sufficient evidence in this record to assess the Project and apply the criteria set forth above.[374]

X. APPLICATION OF ROUTING FACTORS

A. Effects on Human Settlement

375. Minnesota law requires consideration of the Project's effects on human settlement, including displacement of residences and businesses, noise created by construction and operation of the Project, and impacts to aesthetics, cultural values, recreation, and public services.[375]

i. Displacement

376. Xcel Energy does not foresee any residence being permanently displaced by the Project.[376]

377. Xcel Energy developed routes to minimize structures within the Project's 150-foot right-of-way. Notwithstanding this approach, there are some non-residential structures within the right-of-way. In cases in which avoiding non-residential structures entirely was not feasible, the routes were developed so that there is sufficient clearance between the conductors and the structure to comply with applicable standards. Additionally, Xcel Energy's outreach efforts confirm that avoiding residential structures is of greater importance to local stakeholders than avoiding non-residential structures.[377]

378. Xcel Energy indicated that avoiding displacement and minimizing impacts on existing residences was a key consideration in its routing process.[378]

379. The EIS assessed residential proximity with respect to the routes under consideration at 0-75, 75-250, 250-500, and 500-1,600 feet. The Route Permit assessed residential proximity at 0-75, 76-150, 151-300, and 301-500 feet.[379]

380. Xcel Energy's approach when developing the Project routes focused on residences within 500 feet. It maintained that analyzing areas greater than 500 feet was less useful in distinguishing the residential impacts between routes. Xcel Energy's Siting

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[373] Minn. R. 7850.4100(A)-(N) (2023).
[374] *See* Section X *infra*.
[375] Minn. Stat. § 216E.03, subd. 7(b); Minn. R. 7850.4100(A).
[376] Ex. EERA-12 at 85 (DEIS); FEIS at 85.
[377] Ex. EERA-12 at 85 (DEIS); FEIS at 85; Ex. Xcel-19 at 4–5 (Langan Surrebuttal).
[378] *See* Ex. Xcel-19 at 4 (Langan Surrebuttal).
[379] *See* Ex. EERA-12 at 198, Figure 6-2 (DEIS); FEIS at 207, Figure 6-2; Ex. Xcel-2 at 79, 199-210 (RP Application).

and Land Rights Agent, Matthew Langan, testified that avoiding residences within 75 feet of the alignment was of primary importance to the Applicant, followed by distances that were greater than 75 feet (*e.g.,* 76-150 feet, 151-300 feet and 301-500 feet).[380]

381. The FEIS also included an analysis of residential proximity for each route analyzed, as well as identified specific locations where a route would result in a residential property having one or more existing 200-kV or greater transmission lines either paralleling their property boundaries or otherwise crossing their property, and where the Project would add a transmission line to one or more additional sides of the parcel boundary.[381]

382. Some route segments increase impacts to residences, as compared to other route segments. For example, Route Connector 110 and Route Segments 238, 249, 245, 246, and 250 are each in closer proximity to more residences than other available alternatives.[382]

383. The requirements typically imposed by the Commission require permittees to avoid residences. Specifically, Section 5.3.7 of the Sample Route Permit states:

> 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.[383]

384. Likewise, Section 5.5.1 of the Sample Route Permit states:

> The Permittee shall design the transmission line and associated facilities to meet or exceed all relevant local and state codes, the National Electric Safety Code, and 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.[384]

385. Xcel Energy's Preferred Route has the second lowest total number of residences within 500 feet of the alignment: 146 residences. The alignment along an unmodified Blue Route passes by one fewer residence – 145 homes are within 500 feet; 159 homes are within 500 feet of the Purple Route; 172 residences are within 500 feet of

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[380] *See* Ex. EERA-12 at 198 (DEIS); Ex. Xcel-2 at 79 (RP Application); Ex. Xcel-19 at 4 (Langan Surrebuttal).
[381] E.g., FEIS at 77.
[382] *E.g.*, Xcel Energy Response to Hearing Comments (Dec. 13, 2024).
[383] Ex. EERA-12 at 85 (DEIS); FEIS at 86.
[384] Ex. EERA-12 at 85 (DEIS); FEIS at 86.

the proxy end-to-end MDNR route; and Route Options C and D pass within 500 feet of 191 and 192 homes, respectively.[385]

386. Notwithstanding the fact that one fewer home would be impacted by an unmodified Blue Route, Xcel Energy still urges selection of its Preferred (Modified Blue) Route. The Preferred Route better follows existing road right-of-way, parallels existing infrastructure and increases distances for residences than the unmodified Blue Route.[386]

ii. Noise

387. The Minnesota Pollution Control Agency (MPCA) has the authority to adopt noise standards pursuant to Minn. Stat. § 116.07, subd. 2 (2024). The applicable noise standards are set forth in Minn. R. Part 7030, which sets noise limits for different land uses. These land uses are grouped by Noise Area Classification (NAC) and are separated between the daytime and nighttime noise limits. Residences are classified as NAC-1. The most restrictive MPCA noise limits are 60–65 A-weighted decibels (dBA) during the daytime and 50–55 dBA during the nighttime.[387]

388. The EIS analyzed noise for the Project as a whole because there is little variation in the potential for noise impacts across the studied route alternatives.[388]

389. The Project is primarily in rural areas. For most of the Project, ambient noise levels are in the range of 30 to 50 dBA, with temporary, higher noise levels associated with wind, vehicular traffic, and the use of gas-powered equipment (for example, tractors or chain saws).[389]

390. The Project has the potential to emit noise during construction and operation.[390]

391. During Project construction, temporary, localized noise from heavy equipment and increased vehicle traffic is expected to occur along the right-of-way during daytime hours. Construction activity and crews would be present at a particular location during daytime hours for a few days at a time but on multiple occasions throughout the period between the initial right-of-way clearing and final restoration.[391]

392. Construction noise might exceed state noise standards for short intervals at select times and locations. Any exceedances of the MPCA daytime noise limits would be

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[385] Ex. Xcel-16 at 15 (Langan Direct); Ex. Xcel-19 at 4 (Langan Surrebuttal); Ex. EERA-12 at 461-3 (Table 17-2) (DEIS); FEIS at 480-2 (Table 17-2); Ex. Xcel-19 at 4 (Langan Surrebuttal); and Xcel Energy Response to Hearing Comments at 19 (Dec. 13, 2024).
[386] *See* Xcel Energy's Post-Hearing Brief at 2-16; Ex. EERA-12 at 197-199, 235-241 (DEIS); FEIS at 206-208, 245-253.
[387] Ex. EERA-12 at 100 (DEIS); FEIS at 101; Minn. R. 7030.0040.
[388] Ex. EERA-12 at 201 (DEIS); FEIS at 210.
[389] Ex. EERA-12 at 101 (DEIS); FEIS at 102.
[390] Ex. EERA-12 at 101 (DEIS); FEIS at 102.
[391] Ex. EERA-12 at 101 (DEIS); FEIS at 102.

temporary in nature and no exceedances of the MPCA nighttime noise limits are expected for the Project.[392]

393. Noise levels from operational transmission lines depends upon conductor conditions, voltage levels, and the weather conditions. Still, noise levels are anticipated to be within Minnesota noise standards.[393]

394. The substations will be designed such that noise levels would meet Minnesota's noise standards at the substation boundary. Substation noise levels are estimated to be less than 50 dBA at the nearest receptors.[394]

395. Section 5.3.6 of the Sample Route Permit includes a requirement related to noise:

> The Permittee shall comply with noise standards established under Minnesota Rules 7030.0010 to 7030.0080. The Permittee shall limit construction and maintenance activities to daytime working hours to the extent practicable.[395]

396. During operation, permittees are required to adhere to applicable noise standards. No additional mitigation was identified in the EIS.[396]

397. Overall, noise impacts from the construction of the Project are anticipated to be minimal and within the Minnesota noise standards. Likewise, operation of the Project would meet state noise standards.[397]

iii. Aesthetics

398. The Project vicinity is generally flat, with some areas that include rolling plains, streams and rivers. The Project's viewshed includes rural residences and farmsteads along rural county roads.[398]

399. There are several municipalities that are near (within five miles) the route alternatives; outside of this, the Project primarily consists mostly of open space that is used for agricultural purposes. Viewsheds in the agricultural areas are generally broad and uninterrupted except for existing infrastructure.[399]

400. Horizontal elements, such as highways and county roads, are consistent with the long and open viewsheds along most of the open spaces within the project area. Vertical elements – such as HVTLs and wind turbines – are occasionally visible at

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[392] Ex. EERA-12 at 101 (DEIS); FEIS at 102.
[393] Ex. EERA-12 at 102 (DEIS); FEIS at 103.
[394] Ex. Xcel-2 at 33 (RP Application); Ex. EERA-12 at 102 (DEIS); FEIS at 103.
[395] Ex. EERA-12 at 102 (DEIS); FEIS at 103.
[396] Ex. EERA-12 at 102 (DEIS); FEIS at 103.
[397] Ex. EERA-12 at 99 (DEIS); FEIS at 100.
[398] Ex. EERA-12 at 77 (DEIS); FEIS at 77.
[399] Ex. EERA-12 at 77 (DEIS); FEIS at 77.

considerable distances and are the tallest and most prominent visual features on the horizon over the Project area. Solar panels are also visible at times from the anticipated alignments. The Sherco Solar Project near the northern portion of the Project, and the Palmer's Creek Wind Farm near Granite Falls along the Purple Route, would likely be visible from a future alignment in those areas.[400]

401. The route alternatives cross two scenic byways, the Great River Road National Scenic Byway and the Minnesota River Valley Scenic Byway.[401]

402. The Project's structures and conductors would create aesthetic impacts. Aesthetic impacts are assessed, in part, through a consideration of the existing viewshed, landscape, character, and setting of any given area, and how a routing alternative would change those attributes. The degree of these impacts depends upon several factors:

- Proximity to homes, schools, churches, etc., where relatively more observers are present to experience aesthetic impacts.
- The types of structures and structure designs used for the project.
- Paralleling and sharing right-of-way with existing transmission lines to minimize the impacts relative to existing human modifications to the landscape.[402]

403. Paralleling and sharing other types of existing right-of-way where the project would have an incremental impact relative to existing horizontal elements, such as highways and county roads.[403]

404. The Project's aesthetic impacts can be minimized by selecting routes that are located away from homes, schools, businesses, and other places where people congregate. Aesthetic impacts can also be minimized by following existing transmission line right-of-way where elements of the built environment already define the viewshed and the addition of an additional transmission line would have an incremental impact. Following other infrastructure, such as roads and railroads, would also be expected to reduce potential impacts but not to the same extent.[404]

405. Determining the relative value or importance of any given scenic area is somewhat subjective. It necessarily depends upon the evaluator's *a priori* values and expectations around a particular visual resource.[405]

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[400] Ex. EERA-12 at 77 (DEIS); FEIS at 77-78.
[401] Ex. EERA-12 at 77-78 (DEIS); FEIS at 78.
[402] Ex. EERA-12 at 77 (DEIS); FEIS at 78.
[403] Ex. EERA-12 at 77 (DEIS); FEIS at 78.
[404] Ex. EERA-12 at 197 (DEIS); FEIS at 206.
[405] Ex. EERA-12 at 197 (DEIS); FEIS at 206.

406. To move away from that inherent subjectivity, Section 5.3.7 of the Sample Route Permit contains a set of functional standards to "reduce visual disturbances":

> 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.
>
> The Permittee shall use care to preserve the natural landscape, minimize tree removal and prevent any unnecessary destruction of the natural surroundings in the vicinity of the Transmission Facility 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.
>
> The Permittee shall place structures at a distance, consistent with sound engineering principles and system reliability criteria, from intersecting roads, highways, or trail crossings.[406]

iv. Cultural Values

407. Cultural values are those community beliefs and attitudes which provide a framework for community unity and animate community actions. Cultural values can be informed by history and heritage, local resources, economy, local and community events, and common experiences. The Project traverses land that has been home to a variety of persons and cultures over time.[407]

408. The EIS assessed cultural values for the Project as a whole because impacts to cultural values are independent of the route selected.[408]

409. The Project area was populated primarily by Dakota and Ojibwe tribes in the early to mid-1800s. Today, there are currently 11 federally recognized American Indian Tribes with reservations in Minnesota. The nearby Minnesota River Valley is an area of cultural significance for the Upper Sioux Community Pezihutazizi Oyate and Lower Sioux Indian Community, as well as other Tribal Nations whose ancestors previously inhabited land within the Project area.[409]

410. Transmission line and substation projects have the potential to impact community and regional events during construction, primarily due to the presence of

[406] Ex. EERA-12 at 78 (DEIS); FEIS at 79.
[407] Ex. EERA-12 at 79 (DEIS); FEIS at 80.
[408] Ex. EERA-12 at 79 (DEIS); FEIS at 79.
[409] Ex. EERA-12 at 80–82 (DEIS); FEIS at 80-82.

equipment and supplies on local roadways and potential temporary road closures or detours. If they occur, these impacts would be modest and temporary.[410]

411. Construction of the Project is not expected to conflict with the cultural values along the proposed route options. The Project Study Area is predominantly rural in nature with an agriculture-based economy and is anticipated to remain so after construction. None of these aspects of the culture of the area are anticipated to be significantly impacted or changed as a result of the construction and operation of the Project. Substations are not anticipated to impact cultural values because these facilities would be limited to discrete areas and would be sited to avoid impacting public participation in community and regional events.[411]

v. Recreation

412. There are many recreational opportunities in the Project Study Area. Recreational opportunities at public lands include WMAs, Aquatic Management Areas (AMAs), State Water Trails, FWS Waterfowl Production Areas (WPAs), county parks, and golf courses. Each of these public lands offers recreation opportunities that attract residents and tourists.[412]

413. The potential impacts on human and environmental resources are analyzed within specific geographic areas called "regions of influence" (ROI). The ROI is the geographic area where the Project might exert some influence and vary by resource and potential impact. The ROI identified in the EIS for recreational resources is the route width.[413]

414. The EIS identified a few recreational resources within the ROI. These include publicly accessible lands (WMAs, WPAs, and state game refuges) and waters (including state water trails and national or state Wild and Scenic Rivers). Additionally, the Project crosses two scenic byways.[414]

415. Route segments in Region A do not cross any land-based public trails, state water trails, Wild and Scenic Rivers, or scenic byways.[415]

416. Route Segment A4 includes public lands and the Amiret Wildlife Management Area with an access point to the area directly parallel to the anticipated alignment. Other recreational resources in Region A include snowmobile trails and impacts are anticipated to be minimal.[416]

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[410] Ex. EERA-12 at 84 (DEIS); FEIS at 85.
[411] Ex. Xcel-2 at 87 (RP Application).
[412] *Id*. at 99.
[413] Ex. EERA-12 at 7, 104 (DEIS); FEIS at 7,105.
[414] Ex. EERA-12 at 104 (DEIS); FEIS at 106.
[415] Ex. EERA-12 at 202 (DEIS); FEIS at 211.
[416] Ex. EERA-12 at 224 (DEIS); FEIS at 234 and Table 6-13.

417. Route segments in Region B do not cross any land-based public trails. All Route segments in Region B cross Redwood River, a state water trail. All route segments cross the Minnesota River, which is a state water trail and a wild and scenic river. The Minnesota River Valley Scenic Byway is crossed by all of the route segments. Other recreational resources in Region B include snowmobile trails and impacts to those resources are estimated to be minimal.[417]

418. Route segments in Region C do not cross any land-based public trails, state water trails, wild and scenic rivers, or scenic byways. Region C also includes snowmobile trails and impacts to those resources are estimated to be minimal.[418]

419. Route segments in Region D do not cross any land-based public trails. No Wildlife Management Areas or Waterfowl Production Areas are present. All route segments cross the Crow River, a state water trail and wild and scenic river Region D likewise includes snowmobile trails and impacts to those resources are estimated to be minimal.[419]

420. Route segments in Region E do not cross any land-based public trails, state water trails, wild and scenic rivers, or scenic byways. Regional recreational resources in Region E include snowmobile trails and impacts are estimated to be minimal.[420]

421. Route segments in Region F do not cross any land-based public trails, state water trails, wild and scenic rivers, or scenic byways. Regional recreational resources in Region F include snowmobile trails and impacts are anticipated to be minimal.[421]

422. Route segments in Region G do not cross any land-based public trails. All route segments cross the Mississippi River, which is a designated state water trail and a wild and scenic river. Route Segments G1 (Blue Route) and G2 cross the Great River Road Scenic Byway once, while the other segments cross three times. Regional recreational resources in Region G include snowmobile trails and impacts are anticipated to be minimal.[422]

423. Effects on recreation due to construction of the Project are anticipated to be minimal and temporary in nature, lasting only for the duration of construction. These would include short-term disturbances, such as increased noise and dust, and some visual impacts. The impacts could also detract from nearby recreational activities and potentially, depending on the timing, affect nearby hunting or wildlife viewing opportunities by temporarily displacing wildlife. Wildlife, however, is expected to return to the area once construction has been completed. [423]

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[417] Ex. EERA-12 at 269 (DEIS); FEIS at 281.
[418] Ex. EERA-12 at 308 (DEIS); FEIS at 323.
[419] Ex. EERA-12 at 336 (DEIS); FEIS at 351.
[420] Ex. EERA-12 at 361 (DEIS); FEIS at 376.
[421] Ex. EERA-12 at 390 (DEIS); FEIS at 405.
[422] Ex. EERA-12 at 424 (DEIS); FEIS at 441.
[423] Ex. EERA-12 at 105 (DEIS); FEIS at 106-107.

424. While visual impacts would occur, operation of the Project is not anticipated to impede activities such as snowmobiling, golfing, canoeing, hunting, or fishing.[424]

425. Impacts to recreation can be mitigated by selecting route alternatives that avoid areas used for recreation. The Project avoids public lands used for recreational activities.[425]

426. Impacts can also be mitigated by reducing impacts to natural landscapes. Xcel Energy would continue to work with the DNR to reduce and avoid impacts on recreational resources managed by the DNR, including the Wild and Scenic Rivers.[426]

vi. Socioeconomics

427. Construction of the transmission line will employ approximately 150 to 210 construction workers and construction of the substations will employ approximately 60 construction workers. The construction workforce will consist primarily of union labor personnel to complete construction activities.[427]

428. Potential socioeconomic impacts would be short-term due to an influx of construction jobs and personnel, delivery of construction material, temporary housing, and other purchases from local businesses. Slight increases in retail sales in the project area are expected. These would include purchases of lodging, food, fuel, construction materials (lumber, concrete, aggregate), and other merchandise.[428]

429. Construction would take place over the course of 24 to 27 months. Workers would likely be commuting to the area instead of relocating to the Project area. Construction workers traveling to the area might find temporary housing over the span of the Project, but this might move with construction along the Project area.[429]

430. The Project, if constructed, would provide new tax revenue to the communities where it is present. The Project is anticipated to have a positive impact on local tax revenue.[430]

431. The Project would enable the interconnection of more than 4,000 MW of renewable energy generation; as such, additional solar and wind projects are anticipated in the area. The Commission has approved 2,750 MW of renewable generation to interconnect with the project. A 2024 Settlement Agreement contemplates that 2,800 MW of wind and 120 MW of standalone storage would connect to the Project, as well as the proposed 420 MW Lyon County Generating Station. The 2024 Settlement Agreement has

[424] Ex. EERA-12 at 106 (DEIS); FEIS at 107.
[425] Ex. EERA-12 at 106 (DEIS); FEIS at 107.
[426] Ex. EERA-12 at 106 (DEIS); FEIS at 107.
[427] Ex. Xcel-2 at 96 (RP Application).
[428] Ex. EERA-12 at 109 (DEIS); FEIS at 110.
[429] Ex. EERA-12 at 109 (DEIS); FEIS at 110.
[430] FEIS at 111.

not been approved by the Commission. These facilities would be taxable and, therefore, create a new tax base in the counties in which they are located.[431]

432. Comments submitted by stakeholders further detailed the potential socioeconomic benefits of the Project.[432]

433. Overall, the EIS found that socioeconomic factors related to construction and operation of the Project are anticipated to be short-term and positive, but modest, for all route alternatives. Positive impacts come from increased expenditures at local businesses during construction, the potential for some materials to be purchased locally, and the use of local labor. The EIS did not conduct the impact assessment for socioeconomics at the regional level because there is limited variability in socioeconomics across the span of route alternatives.[433]

434. Adverse impacts to socioeconomics are not expected as a result of the Project and no mitigation is necessary.[434]

vii. Environmental Justice

435. The EIS assessed environmental justice impacts under state and federal frameworks.[435]

436. Although not directly applicable to certificate of need and route permit determinations, Minn. Stat. § 216B.1691, subd. 1(e) (2024), defines areas with environmental justice concerns as areas that meet one or more of the following criteria: (1) 40 percent or more of the area's total population is nonwhite; 35 percent or more of households in the area have an income that is at or below 200 percent of the federal poverty level; (3) 40 percent or more of residents over the age of five have limited English proficiency; or (4) the area is located within Indian country, as defined in United State Code, title 18, section 1151.[436]

437. The EIS assessed potential environmental justice impacts by first investigating whether any census tracts that intersect a potential route width met the socioeconomic standards in Minn. Stat. § 216B.1691, subd. 1(e). Second, the EIS explored whether residents in those tracts would be disproportionally affected because of additional exposure to pollutants.[437]

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[431] *Id*. at 471.
[432] *See,* e.g., Public Comments (LIUNA) (Sept. 6, 2024) (eDocket No. 20249-210030-01); Public Comments (IUOE Local 49 and NCSRCC) (Oct. 10, 2024) (eDocket No. 202410-210800-01).
[433] Ex. EERA-12 at 106 (DEIS); FEIS at 107.
[434] Ex. EERA-12 at 110 (DEIS); FEIS at 111.
[435] *See generally* Ex. EERA-12 at 86, 90, 201, 242 and 286 (DEIS), and FEIS at 86-87, 91, 210, 254 and 301.
[436] Minn. Stat. § 216B.1691, subd. 1(e); *see also* Ex. Xcel-2 at 97–98 (RP Application).
[437] Ex. EERA-12 at 86 (DEIS); FEIS at 87.

438. No environmental justice areas were identified in Region A, D, E, F, or G.[438]

439. Census tract 7501, crossed by Route Segment B4 (Blue Route), was identified as a potential area of concern.[439]

440. Census tract 9504, crossed by Route Segment C1 (Purple Route), C2, and C3, was likewise identified as a potential area of concern.[440]

441. Under the federal framework, the burden threshold is poverty (households where income is at or below 100 percent of the federal poverty level) and the socioeconomic threshold is high school education (percent of people ages 25 years or older whose high school education is less than a high school diploma).[441]

442. The Council of Environmental Quality's Climate and Economic Justice Screening Tool identified three census tracts as disadvantaged communities – Census tracts 3605, 7501 and 9701.[442]

443. Census tract 3605 was identified as a disadvantaged community because "[c]ritical service gaps" included poor "access to broadband internet, lack of health insurance, transportation access burden, and being in a food desert." Further, Census tract 7501 was identified as partially disadvantaged, due to a Federally Recognized Tribe, the Lower Sioux, covering one percent of this tract's land. Similarly, Census tract 9701 was identified as partially disadvantaged, because a Federally Recognized Tribe, the Upper Sioux, covered one percent of this tract's land.[443]

444. The EIS found that the Project would not increase any of the burden indicators in these areas, nor would it result in other disproportionate impacts.[444]

445. Because no environmental justice impacts are forecast, the EIS did not propose any mitigation measures.[445]

viii. Public Service and Infrastructure

446. The EIS assessed potential Project impacts on public services and infrastructure – including roadways, railroads, public utilities, emergency services, and airports.[446]

447. Impacts on public services and infrastructure from the Project are projected to be short-term, minimal, and primarily related to construction activities. Negative

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[438] Ex. EERA-12 at 201 (DEIS); FEIS at 210, 334, 359, 387 and 418.
[439] *Ex. EERA-12* at 242 (DEIS); FEIS at 254.
[440] Ex. EERA-12 at 286 (DEIS); FEIS at 301.
[441] Ex. EERA-12 at 90 (DEIS); FEIS at 91.
[442] Ex. EERA-12 at 90 (DEIS); FEIS at 91.
[443] Ex. EERA-12 at 90, 92 (DEIS); FEIS at 91-92.
[444] Ex. EERA-12 at 92 (DEIS); FEIS at 93.
[445] Ex. EERA-12 at 92 (DEIS); FEIS at 93.
[446] Ex. EERA-12 at 110 (DEIS); FEIS at 112.

impacts, such as traffic delays, should be negligible. Other unavoidable impacts can all be minimized and addressed through familiar mitigation measures.[447]

448. Sections 5.3.4 and 5.3.14 of the Sample Route Permit contain mitigation measures related to transportation and public services and utilities.[448]

449. In its RP Application, Xcel Energy pledged ongoing coordination with MnDOT, local road authorities, railroad companies, the FAA, and landowners with private airstrips.[449]

450. Likewise, the EIS indicated that Xcel Energy would continue to work with MnDOT to confirm that the Project meets all applicable guidelines during permitting and final design. Xcel Energy has similarly committed to coordinating with county and township road departments to minimize impacts to local roads and highways.[450]

451. The Project would cross railroads operated by Minnesota Prairie, Twin Cities and Western, Burlington Northern – Santa Fe, and SOO rail lines at several different locations. The Applicant committed to obtain all necessary railroad crossing permits from each of the railroad operators for their respective rail lines. Moreover, for the safety of construction personnel and rail line operations, Xcel Energy has pledged to coordinate with the appropriate railroad personnel during construction to coordinate electrical conductor stringing over the rail line.[451]

452. Where the transmission line crosses streets, roads, highways, or other energized conductors or obstructions, temporary guard or clearance structures might be installed before conductor stringing.[452]

453. Construction of high voltage transmission lines in close proximity to pipelines or railroads may require AC induction mitigation. The cost of mitigation will be dependent upon the amount of AC induction and the mitigation measures that are acceptable to the pipeline company or railroad.[453]

454. The Project is not anticipated to impact emergency services. Thus, the EIS did not propose mitigation for emergency services. Appendix I of the FEIS includes Xcel Energy's *Energy Safety for Emergency Responders: Guidance for Recognizing Potential Hazards Involving Work Around Electricity*. [454]

455. The EIS states that a final route that includes Route Segment 223 would avoid direct impacts to the Lux Strip, a private airstrip. Xcel Energy does not support

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[447] Ex. EERA-12 at 110 (DEIS); FEIS at 111.
[448] Ex. PUC-3 (Sample Route Permit).
[449] Ex. EERA-12 at 115 (DEIS); FEIS at 117; Ex. Xcel-2 at 119 (RP Application).
[450] Ex. EERA-12 at 115 (DEIS); FEIS at 117-118.
[451] Ex. Xcel-2 at 116, 118 and 120 (RP Application).
[452] Ex. EERA-12 at 54 (DEIS); FEIS at 54.
[453] Ex. EERA-12 at 194 (DEIS); FEIS at 202; Xcel Energy Response to Hearing Comments at Attachment A (Dec. 13, 2024).
[454] Ex. EERA-12 at 114-115 (DEIS); FEIS at 116, 118 and Appendix I.

Route Segment 223 in its entirety, because of the higher residential impacts on the southern portion of that alternative. However, Xcel Energy has identified a modified Route Segment 223 which avoids both direct impacts to the Lux airstrip and additional residential impacts to the south.[455]

456. No impacts to public airports are anticipated.[456]

ix. Effects on Human Settlement: Summary of Comparison of Route Alternatives

457. Xcel Energy asserts that no residences will be displaced by the Project.[457]

458. As detailed below, the Blue Route and the Preferred Route minimize residential impacts because fewer residences are within 500 feet of the alignment than when compared to other end-to-end routes studied in this proceeding:

	Preferred Route	MDNR Proxy	Blue Route	Purple Route	Route Option C	Route Option D
Number of residences within 500 feet	146	172	145	159	191	192

[458]

459. Most of the recreational resources in the Project area are linear features that are crossed by all route segments. Few other recreational resources are present within the route width analyzed by EERA.[459]

460. Impacts upon cultural values, environmental justice, noise, property values, socioeconomics, transportation, and public services do not vary significantly among routes.[460]

B. Effects on Public Health and Safety

461. Minnesota's HVTL routing factors require consideration of the Project's potential effect on health and safety.[461]

462. Impacts to human health and safety are assessed by looking at three main issues: electric and magnetic fields, stray voltage, and induced voltage.[462] These issues are not anticipated to vary among route alternatives.

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[455] Ex. EERA-12 at 115 (DEIS); FEIS at 118; Ex. Xcel-19 at 5 (Langan Surrebuttal).
[456] *See* Ex. Xcel-19 at 5-6 (Langan Surrebuttal); Ex. Xcel-2 at 27 (RP Application).
[457] Xcel Energy Response to Hearing Comments at 19 and 26 (Dec. 13, 2024); s*ee* Ex. Xcel-19 at 4 (Langan Surrebuttal).
[458] Xcel Energy Response to Hearing Comments at 19 and 26 (Dec. 13, 2024).
[459] Ex. EERA-12 at 9 (DEIS); FEIS at 9.
[460] Ex. EERA-12 at 7 (DEIS); FEIS at 7.
[461] Minn. Stat. § 216E.03, subd. 7(b)(1); Minn. R. 7850.4100(B).
[462] FEIS at 9, 118; Ex. Xcel-2 at 71 (RP Application).

i. Electromagnetic Fields (EMF)

463. "EMF" is an abbreviation for the terms electric and magnetic fields. For the lower frequencies associated with power lines EMF, there are two key measures: Electric fields are measured in kilovolts per meter (kV/m) and magnetic fields are measured in milliGauss (mG).[463]

464. Electric fields are dependent upon the voltage of a transmission line and magnetic fields are dependent on the current carried by that line. The strength of the electric field is proportional to the voltage of the line. Similarly, the intensity of the magnetic field is proportional to the current flow through the conductors. Transmission lines operate at a power frequency of 60 Hz (cycles per second).[464]

465. Because the EMF associated with a transmission line is proportional to the amount of electrical current passing through the power line, EMF decreases as distance from the line increases. Thus, EMF that reaches a house adjacent to a transmission line right-of-way will be significantly weaker than it would be directly under the transmission line. Electric fields are also shielded by conducting objects, such as trees and buildings.[465]

466. There is no federal standard for transmission line electric fields. The Commission, however, has imposed a maximum electric field limit of 8 kV/m measured at one meter above the ground.[466]

467. The Sample Route Permit includes the following condition:

> The Permittee shall design, construct, and operate the transmission line 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.[467]

468. The maximum electric field associated with the Project (nominal voltage plus five percent), measured at one meter (3.28 feet) above the ground, is estimated to be roughly half of the Commission's ordinary limit: 4.14 kV/m. Further, the strength of these fields diminish rapidly as the distance from the conductor increases.[468]

469. Because magnetic fields are dependent on the current flowing on the line, the EIS' calculations were based upon two typical system conditions that are likely to occur during the Project's first year in service. The two scenarios are system peak energy demand and system average energy demand. System peak energy demand represents

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[463] Ex. Xcel-2 at 121 (RP Application).
[464] *Id.*
[465] Ex. EERA-12 at 117 (DEIS); FEIS at 119.
[466] *In the Matter of the Route Permit Application for a 345 kV Transmission Line from Brookings County, S.D. to Hampton, Minn.*, MPUC Docket No. E-T2/TL-08-1474, Order Granting Route Permit (Sept. 14, 2010) (adopting the Administrative Law Judge's Findings of Fact, Conclusions, and Recommendation at Finding 194).
[467] Ex. EERA-12 at 120 (DEIS); FEIS at 124.
[468] Ex. EERA-12 at 118 (DEIS); FEIS at 118; Ex. Xcel-2 at 131 (RP Application).

the current flow on the line during the peak hour of system-wide energy demand. The peak demand is 1850 amps on both conductors. The system average energy demand (representing the flow of current through the line during a non-peak, average demand) is 1,100 amps on both conductors. For both scenarios, the magnetic field values were calculated at a point where the conductor is closest to the ground. Like electric fields, the strength of magnetic fields decrease rapidly as one moves away from the centerline.[469]

470. The EIS estimates that during times of peak demand, a magnetic field of 237 mG would be detected at one meter off the ground, directly below the centerline. A magnetic field of 237 mG is what one would experience by standing next to a television set or a coffee maker that was in use.[470]

471. Impacts to human health from exposure to EMFs are not forecast. The Project would be constructed to maintain proper safety clearances and the proposed substations would not be accessible to the public. EMF associated with the Project are below Commission permit requirements, and both state and international guidelines.[471]

472. Members of the public referred to a "BioInitiative Report" in public comments. The Commission has already considered the BioInitiative Report in prior dockets and has consistently concluded that the State's current standards are adequately protective of health and safety. No new information has been provided here that discounts those prior conclusions.[472]

473. No impacts to human health due to EMF are anticipated as a result of the Project, and no additional mitigation is necessary.[473]

ii. Stray Voltage

474. "Stray voltage" is a condition that can potentially occur on a property or on the electric service entrances to structures from distribution lines connected to these structures — not the transmission lines proposed here. The term generally describes a voltage between two objects where no voltage difference should exist. More precisely, stray voltage is a voltage that exists between the neutral wire of either the service entrance of premise wiring and grounded objects in buildings – such as barns and milking parlors. The source of stray voltage is a voltage that is developed on the grounded neutral wiring network of a building or the electric power distribution system.[474]

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[469] Ex. EERA-12 at 119 (DEIS); FEIS at 122.
[470] Ex. EERA-12 at 117, 120 (DEIS); FEIS at 122, Table 5-8.
[471] Ex. EERA-12 at 116 (DEIS); FEIS at 118; Ex. Xcel-2 at 131 (RP Application).
[472] FEIS at Appendix B, p. B168. Note: In the FEIS, EERA states that its analysis of EMF "does not and cannot address the fear and anxiety felt by some landowners when faced with the potential for increased EMF near their property." FEIS at 121.
[473] Ex. Xcel-2 at 131 (RP Application).
[474] *Id*. at 130.

475. The proposed transmission line does not create stray voltage because it does not directly connect to businesses, residences or farms.[475]

476. Further, the Project would be constructed to NESC standards; thus potential impacts to residences and farming operations from stray voltage are not anticipated.[476]

477. During the public meetings and hearings in the autumn of 2024, members of the public had questions and comments regarding stray voltage. At those meetings and hearings, representatives of Xcel Energy detailed the Applicant's procedures related to stray voltage. Further, in its Comments on the DEIS, the Applicant provided a link to the *Minnesota Stray Voltage Guide: A Guide for Addressing Stray Voltage Concerns* for the convenience of EERA and the public.[477]

478. Section 5.3.4 of the Sample Route Permit includes the following condition specific to grounding, electric field and electronic interference:

> 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 nonstationary 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 milliampere rms under steady state conditions of the transmission line and to comply with the ground fault conditions specified in the [National Electrical Safety Code]. The Permittee shall address and rectify any induced current problems that arise during transmission line operation.[478]

479. Impacts from stray voltage are not anticipated and no additional mitigation is necessary.[479]

iii. Induced Voltage

480. It is possible for electric fields from a transmission line to extend to a conductive object near the transmission line. This could induce a voltage on the object. For example, transmission lines can induce voltage on a distribution circuit that is parallel

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[475] *Id.*
[476] Ex. EERA-12 at 123 (DEIS); FEIS at 126-127.
[477] Xcel Energy DEIS Comments at 5 (Nov. 25, 2024) (eDocket No. 202411-212383-01).
[478] Ex. EERA-12 at 124–125 (DEIS); FEIS at 128.
[479] Ex. EERA-12 at 125 (DEIS); FEIS at 128. Note: The FEIS notes that if stray voltage impacts were to occur after the transmission line was installed, landowners are encouraged to coordinate with their local electrical provider as outlined in the Minnesota Stray Voltage Guide. If the local provider determines that the impacts are not a result of the distribution system, then landowners are encouraged to contact Xcel Energy.

to and immediately under the transmission line. If the proposed transmission lines parallel or cross distribution lines, appropriate mitigation measures can be taken to address any induced voltages.[480]

481. Additionally, smaller conductive objects near the line could cause a nuisance shock to a person, but these are not a potential safety hazard. Metal buildings within the right-of-way might require grounding. Such impacts would be minimized by adhering to relevant local and state codes, the National Electrical Safety Code (NESC), and requirements of the North American Electric Reliability Corporation.[481]

482. The Project would follow NESC standards, which require the steady-state (continuous) current between the earth and an insulated object located near a transmission line to be below five milliamps (mA). In addition, as noted above, the Commission has imposed a maximum electric field limit of 8 kV/m measured at one meter above the ground. These standards are designed to prevent induced voltage impacts.[482]

483. Also, as noted above, Section 5.3.4 of the Sample Route Permit includes a condition governing the grounding of metallic objects.[483]

484. In Section 6.2.12.4 of the RP Application, Xcel Energy pledged to meet these electrical performance standards.[484]

485. The FEIS notes that when fixed objects such as metal sheds or vehicles are subject to electric field induction, grounding through a ground rod is a frequently sufficient mitigation measure.[485]

C. Effects on Land-Based Economies

486. Minnesota's HVTL routing factors require consideration of the Project's impacts to land-based economies – specifically, agriculture, forestry, tourism, and mining.[486]

i. Agriculture

487. Agriculture is the predominant land-use within the Project ROI – in this case, the route width for the Project. Potential impacts are assessed through consideration of total agricultural land use, presence of prime farmlands, and agricultural practices (such as aerial spraying or use of center pivot irrigation systems).[487]

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[480] Ex. EERA-12 at 125 (DEIS); FEIS at 128-129; Ex. Xcel-2 at 130 (RP Application).
[481] Ex. EERA-12 at 125 (DEIS); FEIS at 129.
[482] Ex. EERA-12 at 126 (DEIS); FEIS at 129.
[483] Ex. EERA-12 at 124–125 (DEIS); FEIS at 129.
[484] Ex. EERA-12 at 126 (DEIS); FEIS at 130; Ex. Xcel-2 at 130 (RP Application).
[485] FEIS at 128.
[486] Minn. Stat. § 216E.03, subd. 7(b)(5); Minn. R. 7850.4100(C).
[487] Ex. EERA-12 at 129 (DEIS); FEIS at 132-133; Ex. Xcel-2 at 132 (RP Application).

488. The average farm size within the Project Study Area ranges from 180 acres in Wright County to 608 acres in Renville County. In general, average farm sizes in the northeastern portion of the Project Study Area are smaller than farm sizes in the southwestern portion of the Project Study Area. Areas of prime farmland follow a similar pattern with the amount of prime farmland steadily increasing as the routes travel to the southwestern portion of the Project Study Area.[488]

489. By reviewing publicly available data and aerial imagery during the route development process, the Applicant attempted to avoid, where practicable, specialty crops, organic farms, and center-pivot irrigation systems.[489]

490. During construction, impacts would include the limited use of fields or certain portions of fields for a specific time period, compacting soil, generating dust, damaging crops or drain tile, and causing erosion. Permanent impacts would also occur when the footprint of the Project structures impedes agricultural production or the efficiency of tillage, planting, spraying and harvesting – because Project structures must be avoided during these activities. Prudent routing minimizes such potential impacts. Implementation of the AIMP would also minimize and mitigate impacts to agriculture.[490]

491. Most land (60 percent or more) within the route widths of the segments in Region A is designated as agricultural land use (cultivated crops and hay and pasture). Route Segment A4 is the longest route segment (18.1 miles) and has the most prime farmland. Route Segment A5 has the least prime farmland.[491]

492. Most land (more than 70 percent) within the route widths of the segments in Region B is designated as agricultural land use. Route Segment B4 (Blue Route) is the longest route segment (75.3 miles) and has the most prime farmland. The other route segments have similar amounts prime farmland and are similar lengths (45.4 to 51.0 miles).[492]

493. Most land (more than 60 percent) within the route widths of the segments in Region C is designated as agricultural land use. Route Segment C4 (Blue Route) has the least prime farmland; it is also the shortest route segment (28.6 miles). The total acres of prime farmland in Route Segments C1 (Purple Route), C2, and C3 are comparable (within six percent of one another) and their lengths are also comparable (56.0 to 58.5 miles).[493]

494. Most land (more than 70 percent) within the route widths of the segments in Region D is designated as agricultural land use. Route Segment D7 has the most prime farmland and farmland of statewide importance and is the longest route segment

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[488] Ex. Xcel-2 at 132 (RP Application).
[489] *Id.*
[490] Ex. EERA-12 at 204 (DEIS); FEIS at 213.
[491] Ex. EERA-12 at 204 (DEIS); FEIS at 213.
[492] Ex. EERA-12 at 244 (DEIS); FEIS at 256.
[493] Ex. EERA-12 at 289 (DEIS); FEIS at 303.

(12.8 miles). Route Segments D1 (Purple Route) and D2 have the least prime farmland and are the shortest segments (9.1 and 9.2 miles).[494]

495. Most land (70 percent or more) within the route widths of the segments in Region E is designated as agricultural land use. Route Segment E2 (Blue Route) has less prime farmland and farmland of statewide importance and is the shorter route segment (17.7 miles). Route Segment E2 (Blue Route) also parallels more existing infrastructure (52 percent of its total length).[495]

496. More than 40 percent of the land within the route widths of segments F2, F3, F4 (Blue Route), F5, F6, and F8 is designated as agricultural land use. For Route Segments F1 (Purple Route) and F7, agricultural land use is 40 percent or more within the route width. Route Segment F3 has the most prime farmland; Route Segment F4 (Blue Route) has the most farmland of statewide importance. Route Segment F7 has the least prime farmland; Route Segment F1 (Purple Route) has the least farmland of state importance.[496]

497. Most land (more than 50 percent) within the route widths of the segments in Region G is designated as agricultural land use for cultivated crops. Route Segment G4 has the most prime farmland and farmland of statewide importance. Route Segment G6 has the least prime farmland. Route Segment G2 has the least farmland of statewide importance.[497]

498. Some route segments would increase the likelihood of interference with center pivot irrigation systems. For example, Route Segments 114, 237, 240 and 249 increase the potential impacts to center pivot irrigation systems.[498]

499. The placement of transmission line structures in cultivated cropland has the potential to interfere with farming operations if paralleling field edges and roadways is not possible due to other routing constraints. The placement of a substation on land used for row crop cultivation would result in a permanent conversion from row crop production to industrial use for the life of a project.[499]

500. The FEIS states that public commenters expressed concerns with what would happen to the Project at the end of its useful life. The FEIS further noted that decommissioning plans are not typically included as part of the Commission's transmission line route permit conditions. Although Xcel Energy stated that high voltage transmission lines are seldom completely retired, and Xcel Energy does not anticipate

[494] Ex. EERA-12 at 322 (DEIS); FEIS at 337.
[495] Ex. EERA-12 at 346-347 (DEIS); FEIS at 362.
[496] Ex. EERA-12 at 374 (DEIS); FEIS at 389.
[497] Ex. EERA-12 at 403 (DEIS); FEIS at 420.
[498] Xcel Energy Response to Hearing Comments (Dec. 13, 2024).
[499] Ex. Xcel-2 at 135 (RP Application).

decommissioning the Project after any certain number of years, EERA indicated that such a plan may be useful.[500]

501. Xcel Energy stated that it does not support preparing a decommissioning plan for the Project because a decommissioning plan would be speculative and not useful for an asset like the Project that does not have a specific service life. Further, Xcel Energy is a rate-regulated utility subject to the ongoing jurisdiction of the Commission. At the time of decommissioning, a decommission plan established by Xcel Energy, subject to approval by the Commission, is a reasonable permit condition.[501]

ii. Forestry

502. The EIS assessed potential forestry impacts with respect to the route widths of the studied routes. Potential impacts are assessed through identification of commercial operations. Few forested areas are found within the ROI because most of the land cover is agricultural. As such, potential impacts to land-based economies for forestry would be negligible with one potential exception: A Christmas tree farm was identified within the route width of Route Segment 244. No additional forestry resources were identified. Xcel Energy stated that it would coordinate with the owner of the Christmas tree farm, if that route segment is selected.[502]

iii. Mining

503. The EIS assessed potential impacts on mining within the route widths of the studied routes. Potential impacts are assessed through identification of known, existing mining operations and assessing potential impacts to those operations from the Project. The EIS also documents the location of prospect mines within the ROI.[503]

504. Mining does not comprise a major industry within the Project area. However, there are aggregate mining sites (typically for sand or gravel) in the ROI – including active mining sites in Region F and Region G. There are also prospective sites within Region B and Region C.[504]

505. These aggregates are primarily mined for local use such as making concrete for highways, roads, bridges, and other construction projects. These mining operations are owned by citizens, private companies or MnDOT.[505]

506. Construction of the Project would require sand and aggregate for structure backfill, concrete, and to maintain reliable access routes. Some of the aggregate material could come from local sources. Although demand would temporarily increase during

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[500] FEIS at 55; Xcel Energy Response to Hearing Comments at 32 (Dec. 13, 2024) (eDocket No. 202412-212990-02)
[501] Xcel Energy Response to Hearing Comments at 32 (Dec. 13, 2024) (eDocket No. 202412-212990-02).
[502] Ex. EERA-12 at 130 (DEIS); FEIS at 137; Ex. Xcel-2 at 136 (RP Application); Ex. Xcel-19 at 7 (Langan Surrebuttal); Xcel Energy Response to Hearing Comments (Dec. 13, 2024).
[503] Ex. EERA-12 at 131 (DEIS); FEIS at 134.
[504] Ex. EERA-12 at 131 (DEIS); FEIS at 135.
[505] Ex. EERA-12 at 131 (DEIS); FEIS at 135; Ex. Xcel-2 at 137 (RP Application).

construction, it is anticipated that no new aggregate source facilities would be constructed, nor would any existing facilities be expanded.[506]

507. Impacts to mining would be minimal. There are some gravel pit operations present within the route width of the routes studied in the EIS, but oftentimes the final alignment is anticipated to be on the outer edge or across the road from the gravel pit. Route Segments F3 and F6 would be anticipated to interfere with the current gravel pit operations at MnDOT ASIS Number 73079. Likewise, Route Connector 109 crosses an active gravel pit.[507]

iv. Tourism

508. The ROI for assessing potential impacts to tourism is the local vicinity of the Project. The assessments begin by identifying resources utilized by non-residents who visit the area and bring in non-local tourism revenue to the area.[508]

509. Tourism in the vicinity of the Project centers around outdoor recreational opportunities and various festivals and activities. The latter are hosted by the larger cities near the route options – such as Becker, Granite Falls, Marshall, Redwood Falls and Willmar. Outside of these municipalities, residents and tourists enjoy recreational opportunities at the WMAs, WPAs, state parks, city parks, Mississippi River, Crow River, Minnesota River State Water Trails, and snowmobile trails.[509]

510. The EIS does not identify tourism opportunities within the ROI beyond outdoor activities.[510]

511. Impacts to the tourism economy are anticipated to be negligible to minimal and independent of route selected. There are limited recreational resources within the route width; therefore, any direct impacts to recreation that would cause an indirect impact to tourism-based economies are anticipated to be negligible.[511]

v. Effects on Land-Based Economies: Summary of Comparison of Route Alternatives

512. Most of the land within the Project area is used for agricultural purposes, and general impacts are not anticipated to vary significantly among route alternatives. Although, as noted above, a portion of the Blue Route (Routes C2, C3, and C4) could impact the Lux Airstrip. Xcel Energy identified a modified Route Segment 223 to avoid these impacts additional residential impacts in that segment. The northern portion of the

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[506] Ex. EERA-12 at 131 (DEIS); FEIS at 135.
[507] Ex. EERA-12 at 10 (DEIS); FEIS at 10; Xcel Energy Response to Hearing Comments (Dec. 13, 2024).
[508] Ex. EERA-12 at 131 (DEIS); FEIS at 135.
[509] Ex. Xcel-2 at 137 (RP Application).
[510] Ex. EERA-12 at 131 (DEIS); FEIS at 135.
[511] Ex. EERA-12 at 10, 134 (DEIS); FEIS at 10, 138.

Project also includes the highest concentration of center pivot irrigation systems; these systems exist on both the Blue and Purple Routes.[512]

513. Impacts to mining are anticipated to be minimal, although there are gravel pit operations near some of the route alternatives. It is anticipated that any final alignment would avoid such operations.[513]

514. Impacts on forestry and tourism do not vary significantly amount route alternatives.[514]

D. Effects on Archaeological and Historic Resources

515. Minn. R. 7850.4100(D) requires consideration of the effects of the Project on historic and archaeological resources.[515]

516. To determine potential impacts to historic and archaeological resources, known archaeological and historic sites within one mile of the Route Alternatives and the three substations (the Garvin, Intermediate, and the Support Substations) were identified. Research queries were submitted to OSA's and Minnesota State Historic Preservation Office's (SHPO) online portals. Additional cultural resources, beyond those listed in state records, might be identified during future surveys of a final route selected by the Commission, but prior to construction.[516]

517. On September 19, 2024, the Commission filed a letter authorizing Xcel Energy to consult with SHPO on potential effects of the Project to designated historic properties. Xcel Energy prepared and submitted a Phase 1a archaeological assessment as directed by the SHPO.[517]

518. On September 25, 2024, SHPO confirmed that that it had reviewed the proposed survey plan and concluded that it was appropriate. Since that time, Xcel Energy has worked cooperatively with SHPO and interested Tribal Nations to develop a Phase I Cultural Resource Reconnaissance survey and an Architectural History Inventory survey.[518]

519. Impacts to archaeological and historic resources could result from construction activities such as right-of-way clearing, removal of buildings and structures, placement of structures, the construction of new substations and new access roads, development of temporary construction areas, and vehicle and equipment operation.[519]

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[512] Ex. EERA-12 at 9–10 (DEIS); FEIS at 10.
[513] Ex. EERA-12 at 10 (DEIS); FEIS at 10.
[514] Ex. EERA-12 at 7 (DEIS); FEIS at 7.
[515] Minn. R. 7850.4100(D).
[516] Ex. EERA-12 at 10, 11 and 138–139 (DEIS); FEIS at 11, 140-141.
[517] Ex. PUC-10 (SHPO Authorization); *see also* Minn. Stat. § 138.665 (2024).
[518] Ex. Xcel-16 at 20 (Langan Direct); Ex. Xcel-19 at 2 and Schedule 1 (Langan Surrebuttal).
[519] Ex. EERA-12 at 139 (DEIS); FEIS at 143.

520. Xcel Energy committed to: (a) conducting additional research to identify cultural resources and cemeteries: (b) continued coordination with SHPO and Tribal Nations on land surveys; and (c) avoiding or mitigating potential effects on the resources that are identified by these surveys. The survey strategy is expected to result in both a Phase I Cultural Resource Reconnaissance survey and an Architectural History Inventory (Phase I Survey). If cultural resources, mortuary sites, or cemeteries are identified during the Phase I Survey, avoidance would be the primary mitigation measure. Avoidance of resources could include adjustments to the Project design and designation of sensitive areas that would not be disturbed or spanned by the Project.[520]

521. Section 5.3.15 of the Sample Route Permit contains the following condition related to archaeological and historic resources:

> The Permittee shall make every effort to avoid impacts to archaeological and historic resources when constructing the Transmission Facility. In the event that a resource is encountered, the Permittee shall 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 Transmission Facility impacts on the resource consistent with State Historic Preservation Office and State Archaeologist requirements.
>
> Prior to construction, the Permittee shall train workers 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. The Permittee shall not resume construction at such location until authorized by local law enforcement or the State Archaeologist. The Permittee shall keep records of compliance with this section and provide them upon the request of Commerce or Commission staff.[521]

i. Effects on Archaeological and Historic Resources: Summary of Comparison of Route Alternatives

522. Archaeological resources within the route widths are concentrated near watercourses and waterbodies in Regions A, B, C, and G; although some resources are not listed on the National Register of Historic Places. There is limited differentiation in impacts to archaeological and historic resources between the Route Alternatives.[522]

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[520] Ex. EERA-12 at 11, 141 (DEIS); FEIS at 11, 145.
[521] Ex. EERA-12 at 140 (DEIS), Appendix F (Sample Route Permit); FEIS at 144.
[522] Ex. EERA-12 at 10, 458 (DEIS); FEIS at 10, 477.

523. Historic architectural resources such as bridges, culverts, roadways, residential, commercial and industrial structures, government buildings, churches, schools, town halls, farmsteads and associated structure, and railroads are not within the route widths, but are present within one mile of Project Area. Impacts to architectural and historic resources can be minimized through prudent routing and structure placement and by avoiding known resources.[523]

524. Xcel Energy considered information regarding the location of previously documented cultural sites and designed the routes to minimize any physical impacts to known resources. Impacts to known archaeological and historic resources within the route width will be avoided through prudent routing or structure placement. Impacts to cultural resources, mortuary sites, or cemeteries identified during the Phase I Survey will be avoided through adjustments to the Project design and designation of sensitive areas that are not to be disturbed or spanned by the Project. Xcel Energy will also develop an Unanticipated Discoveries Plan for use during construction. The plan will outline the procedures to be followed if unanticipated archaeological resources are discovered.[524]

E. Effect on Natural Environment

525. Minnesota's HVTL routing factors require consideration of the Project's effect on the natural environment, including effects on air quality resources, water quality resources, flora and fauna.[525]

i. Air Quality

526. Construction of the Project will result in intermittent and temporary emissions of criteria pollutants. These emissions generally include dust generated from soil disturbing activities (such as earthmoving); wind erosion associated with right-of-way clearing; combustion emissions from construction machinery engines, and indirect emissions that follow from construction workers commuting to and from work sites. Construction emissions would vary depending upon weather conditions, the equipment at any specific location, and the duration of operations at a particular location.[526]

527. The Clean Air Act regulates air emissions from stationary and mobile sources. It requires the U.S. Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for six criteria pollutants: ground-level ozone (O_3), particulate matter (PM_{10}/$PM_{2.5}$), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), carbon monoxide (CO), and lead (Pb). The EPA classifies all counties traversed by the Route Alternatives as attainment areas, meaning that the air quality meets all NAAQS.[527]

528. Potential impacts to air quality during construction would be intermittent, localized, short-term, and minimal. Air emissions during construction would primarily

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[523] Ex. EERA-12 at 139-140 (DEIS); FEIS at 143-144.
[524] Ex. Xcel-2 at 145–147 (RP Application); Ex. EERA-12 at 141, 456 (DEIS); FEIS at 145, 475-476.
[525] Minn. Stat. § 216E.03, subd. 7(b)(1)–(2); Minn. R. 7850.4100(E).
[526] Ex. Xcel-2 at 148 (RP Application).
[527] *Id.*; Ex. EERA-12 at 141 (DEIS); FEIS at 145.

consist of emissions from construction equipment and vehicles and would include pollutants such as CO_2, nitrogen oxides (NOx), and PM. Dust generated from earth disturbing activities also gives rise to $PM_{10}/PM_{2.5}$. Construction emissions would be dependent upon weather conditions, the amount of equipment at any specific location, and the period of operation required for construction at that location.[528]

529. During operation and maintenance activities, small amounts of emissions would be associated with fuel combustion and roadway dust. Further, small amounts of NOx and O_3 would be created from corona (loss of electricity) along transmission lines.[529]

530. Dust control during construction could include application of water or other commercially available non-chloride dust control agents on unpaved areas; reducing the speed of vehicular traffic on unpaved roads; and covering open-bodied haul trucks. Potential impacts to air quality are expected to be similar across the entire Project, regardless of route. For that reason, the EIS did not assess air quality at the regional level. The expected impacts are largely independent of the route selected.[530]

ii. Greenhouse Gas

531. Project construction activities will result in temporary and intermittent increases in greenhouse gas (GHG) emissions from fuel combustion in construction equipment and commuter vehicles. These emissions would be short-term and dispersed over the right-of-way; therefore, total emissions would be minimal and would not result in a direct impact to any one location.[531]

532. The use of fluorinated gas, sulfur hexafluoride (SF_6), in high-voltage circuit breakers may increase GHG emissions associated with the Project. Potential emissions from SF_6 are minimal and not routine. They largely follow from faulty equipment and leakage. Equipment containing SF_6 is specifically designed to avoid these emissions.[532]

533. Minimization efforts to reduce project construction GHG emissions would include limits to vehicle idling times. Minimization efforts to reduce operational GHG emissions would include following safe handling practices during maintenance of circuit breakers, avoiding exposure to high temperatures, and monitoring for leaks.[533]

534. Generally, variability in total anticipated GHG emissions by route segment (or region) are a function of route lengths and differences in anticipated land use. Because the lengths of the Route Alternatives are similar, and the Project area has limited variability in land uses, GHG emissions are likely to be similar across the entire Project.[534]

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[528] Ex. EERA-12 at 141-142 (DEIS); FEIS at 145-146; Ex. Xcel-2 at 148 (RP Application).
[529] Ex. EERA-12 at 143–44 (DEIS); FEIS at 147.
[530] Ex. EERA-12 at 141, 143 (DEIS); FEIS at 145, 147.
[531] Ex. EERA-12 at 153 (DEIS); FEIS at 157.
[532] Ex. EERA-12 at 156 (DEIS); FEIS at 160.
[533] Ex. EERA-12 at 156, Appendix L at Table 1 (DEIS); FEIS at 160, Appendix L at Table 1.
[534] Ex. EERA-12 at 156 (DEIS); FEIS at 159.

iii. Climate Change

535. The impact analysis for climate considers existing patterns in the ten counties in which the Route Alternatives are located and how the Project could be impacted by climate change, as well as how the Project could affect climate change. Table 4 below denotes climate change risks for the counties traversed by the Project.

Table 4: Climate Change Risks for Counties Traversed by the Project

County	Flood Risk	Wildfire Risk	Wind Risk	Air Quality Risk	Heat Risk
Chippewa	Moderate	Moderate	Minimal	Moderate	Minor
Kandiyohi	Minor	Moderate	Minimal	Moderate	Minor
Lyon	Minor	Moderate	Minimal	Minor	Minor
Meeker	Minor	Moderate	Minimal	Moderate	Minimal
Redwood	Minor	Moderate	Minimal	Minor	Minor
Renville	Minor	Moderate	Minimal	Minor	Minor
Sherburne	Moderate	Moderate	Minimal	Moderate	Minor
Stearns	Moderate	Moderate	Minimal	Moderate	Minor
Wright	Major	Moderate	Minimal	Minor	Minor
Yellow Medicine	Moderate	Moderate	Minimal	Minor	Minor

[535]

536. The climate change risks that are mostly likely to follow from the Project are increases to the frequency of "100-Year storms" and soil erosion from intense storms.[536]

537. The Project's design incorporates elements that minimize impacts from the weather events that are likely to follow form a warming climate – such as greater rainfall, flooding, storms, high winds and heat waves. The Project design would include shield wire for lighting protection and steel structures with twisted pair conductors to withstand more frequent and intense rain events. If structures are installed in areas that are prone to flooding, Xcel Energy would design the structure foundations to be one foot above the 100-Year floodplain elevation.[537]

[535] Ex. EERA-12 at 144, 150 (DEIS); FEIS at 148, 154.
[536] Ex. EERA-12 at 150 (DEIS); FEIS at 154.
[537] Ex. EERA-12 at 150-151 (DEIS); FEIS at 154-155.

iv. Geology and Topography

538. Construction and operation of transmission line projects have the potential to impact geology in the Project area. These impacts can be temporary, construction-related impacts and longer-term impacts.[538]

539. The Project area surface geology is dominated by quaternary aged glacial deposits. The thickness of these deposits varies; however, the thicknesses generally range from between 50 and 650 feet, with some areas where bedrock is present just below the surface. Bedrock in the Project area consists of Cretaceous shale and sandstone, and Precambrian igneous and metamorphic rocks.[539]

540. Structure foundations have the potential to impact bedrock; however, impacts to topography along the Project right-of-way, such as the creation of abrupt elevation changes, are not expected. To the extent feasible, contours would be re-graded and revegetated. New substations can likewise alter existing topography; however, permanent stormwater management measures would address drainage from new impervious surfaces and any changes in the surrounding topography.[540]

541. The EIS did not separately assess regional level impacts to geology and topography because these impacts are largely independent of the route selected.[541]

v. Soils

542. Soil information for the Project right-of-way was obtained from the USDA-NRCS Soil Survey Geographic database. Soil in the right-of-way generally includes four soil texture classes: loam, silty clay loam, sandy loam, or clay loam. The drainage classes of these soils range from very poorly drained to well drained. Table 5 below denotes NRCS mapped soils in the right-of-way for each route segment by region.[542]

Table 5: Summary of NRCS mapped soils within right-of-way (acres)

Region	Route Segment	Length (mi)	Hydric Soils [1]	Compaction Prone [2]	Rutting Hazard [3]	Erosion Hazard (Off-Road, Off-Trail) [4]	Revegetation Concerns [5]
A	A1 (Purple Route)	17.49	78	96	318	39	0
	A2	17.58	76	89	320	35	0
	A3 (Blue Route)	14.59	81	57	265	9	0
	A4	18.14	81	74	330	11	0
	A5	15.11	63	91	274	30	0
	A6	14.54	81	67	264	12	0
	A7	14.56	79	56	264	10	0
B	B1 (Purple Route)	45.41	98	426	821	71	25

[538] Ex. EERA-12 at 151 (DEIS); FEIS at 156.
[539] Ex. EERA-12 at 151 (DEIS); FEIS at 155.
[540] Ex. EERA-12 at 151, 153 (DEIS); FEIS at 157.
[541] Ex. EERA-12 at 151 (DEIS); FEIS at 155.
[542] Ex. EERA-12 at 172–173, Appendix E (DEIS, Route Alternatives Data Analysis Tables); FEIS at 178, Appendix E (Route Alternatives Data Analysis Tables).

Region	Route Segment	Length (mi)	Hydric Soils [1]	Compaction Prone [2]	Rutting Hazard [3]	Erosion Hazard (Off-Road, Off-Trail) [4]	Revegetation Concerns [5]
	B2	51.03	144	458	920	141	25
	B3	46.92	110	411	847	68	25
	B4 (Blue Route)	75.26	360	510	1,359	233	0
C	C1 (Purple Route)	55.98	209	435	1,018	64	51
	C2	58.53	350	286	1,064	36	12
	C3	57.9	214	323	1,053	29	29
	C4 (Blue Route)	28.61	164	99	521	26	0
D	D1 (Purple Route)	9.06	47	72	165	6	0
	D2	9.24	48	72	168	6	0
	D3	10.1	55	70	184	6	0
	D4 (Blue Route)	10.78	69	65	196	10	0
	D5	10.86	67	75	198	5	0
	D6	11.39	66	65	207	11	0
	D7	12.76	69	99	232	15	0
E	E1 (Purple Route)	17.68	64	225	320	30	0
	E2 (Blue Route)	16.55	56	193	301	21	0
F	F1 (Purple Route)	2.24	0	32	35	2	0
	F2	2.28	2	35	40	1	0
	F3	2.71	0	43	49	2	0
	F4 (Blue Route)	2.7	0	43	47	1	0
	F5	2.43	0	43	44	1	0
	F6	2.65	0	42	48	2	0
	F7	2.14	0	37	39	1	0
	F8	2.69	0	46	49	2	0
G	G1 (Blue Route)	25.43	9	220	460	6	0
	G2	24.63	7	208	445	8	0
	G3 (Purple Route)	22.7	9	257	410	29	130
	G4	25	10	304	451	32	130
	G5	24.25	10	271	438	32	130
	G6	22.74	9	273	411	38	130

[1] Hydric soil includes hydric soils (100 percent) and predominantly hydric soils (67–99 percent).
[2] Soils considered susceptible to Rutting Hazard include those with a rating of "moderate" or "severe."
[3] Soils considered to be compaction prone soils include those with a rating of "medium" or higher.
[4] Soils considered susceptible to erosion hazard soils include those with a rating of "medium," "severe," or "very severe".
[5] Soils considered to have revegetation concerns include soils with a non-irrigated land capability classification of three or greater.

543. Construction and operation of the Project have the potential to impact soils within the right-of-way. For example, construction might require some grading to provide a level surface for safe operation of construction equipment. In addition, some topsoil and subsoil mixing might result from excavating, stockpiling, and redistributing those soils during installation of transmission line structures and substation components. Lastly, during operation, soils could be temporarily disturbed to permit maintenance equipment access to the transmission line. Where the same access route is used to access multiple structure locations, the impacts could be more intense on the more heavily traveled route.[543]

[543] Ex. EERA-12 at 174 (DEIS); FEIS at 178-179.

544. Construction of new substations and modifications to existing substations would result in impacts to soils within the facility footprint.[544]

545. During construction of the transmission line, impacts to soils along the transmission line would be mitigated through the use of best management practices; such as minimizing the number of vehicles trips and segregating topsoil from subsoil. Xcel Energy has also committed to soil decompaction during restoration of temporary workspaces, including travel lanes.[545]

vi. Water Quality and Resources

546. The RP Application and the EIS analyzed impacts to water resources; including groundwater, surface water, wetlands, impaired waters, and floodplains.[546]

1) Groundwater

547. Installation of concrete structure foundations could require dewatering to enable construction activities and could impact bedrock and groundwater if no avoidance or minimization measures are implemented. Without avoidance and minimization measures, the disturbance of soils and vegetative cover could affect water quality in adjacent groundwater resources. The Project Stormwater Pollution Prevent Plan (SWPPP) would outline best management practices for sediment controls so sediment-laden waters are not discharged directly onto the surface and erosion control to promote infiltration and avoid erosion during discharge. [547]

548. Wells exist throughout the Project area. There are approximately 20 active wells within the right-of-way of Route Alternatives, and approximately 80 active domestic water wells within the proposed substation siting areas. In addition, route alternatives studied in the EIS cross several Wellhead Protection Areas (WHPAs) and Drinking Water Supply Management Areas (DWSMAs). WHPAs are areas surrounding public water supply wells that contribute groundwater to the well. DWSMAs are delineated areas within the WHPA and are managed in a wellhead protection plan.[548]

549. Overall impacts to groundwater resources are not anticipated because water supply needs will be limited and any effects on water tables would be localized and short term. Based upon the modest increases to impervious surface area that will be created by Project components (*i.e.,* substations and structure foundations), the Project will have minimal impacts on the recharging of regional groundwater.[549]

550. Indirect impacts to groundwater can be mitigated by avoiding or minimizing impacts to surface waters. Measures to control soil erosion and sedimentation would be

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[544] Ex. EERA-12 at 174 (DEIS); FEIS at 179.
[545] Ex. EERA-12 at 175 (DEIS); FEIS at 180.
[546] *See generally* Ex. Xcel-2 at 160-179 (RP Application); Ex. EERA-12 at 157-187 (DEIS); FEIS at 161-193.
[547] *See generally* Ex. EERA-12 at 157 (DEIS); FEIS at 161, 164-166.
[548] Ex. EERA-12 at 158-159 (DEIS); FEIS at 162-163.
[549] Ex. EERA-12 at 157 (DEIS); FEIS at 161.

implemented during construction activities. Potential impacts to groundwater are expected to be similar to across the entire Project. The EIS did not assess geology and topography at the regional level because the impacts are anticipated to largely be independent of the route selected.[550]

551. Xcel Energy would conduct geotechnical evaluations prior to Project construction and identify locations where potential groundwater impacts could occur. Xcel Energy pledges to coordinate with the MDNR, as necessary, to confirm that ground disturbing activities such as geotechnical investigation and structure installation placement do not disrupt groundwater hydrology.[551]

552. Xcel Energy would also assess any wells identified within the right-of-way during Project construction and seal them, if necessary, in accordance with Minnesota Department of Health requirements. Xcel Energy would adhere to the Minnesota Department of Health water supply well rule when placing project components.[552]

2) Surface Water

553. The Project is within the Upper Mississippi and Minnesota River Basins. Surface waters in the route width include rivers and streams (watercourses) and lakes and ponds (waterbodies). Many of these surface waters are designated as public watercourses and public water basins in MDNR's public waters inventory (PWI).[553]

554. Major watercourses within the route width include: Meadow Creek; the Cottonwood River; the Redwood River; the Yellow Medicine River; the Crow River; the Clearwater River; the Minnesota River; and the Mississippi River. Several larger waterbodies within the route width include Belle Lake, Locke Lake, Lynden Lake, Wilcox Lake, Long Lake, and Sather Lake, among others.[554]

555. Table 6 below details the surface waters within the right-of-way and route widths of routes that were analyzed in the EIS.[555]

[550] Ex. EERA-12 at 161, 211 (DEIS); FEIS at 166, 221.
[551] Ex. EERA-12 at 160 (DEIS); FEIS 165.
[552] FEIS at 166.
[553] Ex. EERA-12 at 176 (DEIS); FEIS at 180-181.
[554] Ex. EERA-12 at 175–176 and Map 14 (DEIS); FEIS at 181-182 and Map 14.
[555] Ex. EERA-12 at Appendix E (Route Alternatives Data Analysis Tables) (DEIS); FEIS at Appendix E (Route Alternatives Data Analysis Tables).

Table 6: Surface Waters

Route Segment	Length (mi)	National Hydrography Dataset Waterbodies			Public Water Inventory Basins			National Hydrography Dataset Watercourse Types			Impaired Streams	National Hydrography Dataset Watercourses	Public Water Inventory Streams
								Perennial Stream/River	Intermittent Stream/River	Other Watercourse Type			
		Crossing Count	Within right-of-way Area (ac)	Within Route Width Area (ac)	Crossing Count	Within right-of-way Area (ac)	Within Route Width Area (ac)	Crossing Count	Crossing Count	Crossing Count	Crossing Count	Crossing Count	Crossing Count
A1 (Purple Route)	17.49	0	< 1	< 1	0	0	0	2	18	0	4	20	3
A2	17.58	0	0	0	0	0	0	2	15	0	4	17	4
A3 (Blue Route)	14.59	0	< 1	2	0	0	0	2	13	0	3	15	3
A4	18.14	1	< 1	4	0	< 1	5	3	17	0	3	20	3
A5	15.11	0	< 1	< 1	0	0	0	2	15	0	3	17	3
A6	14.54	0	< 1	1	0	0	0	2	14	0	3	16	3
A7	14.56	0	< 1	1	0	0	0	2	10	0	3	12	3
B1 (Purple Route)	45.41	2	1	9	0	0	0	4	7	22	10	33	16
B2	51.03	3	4	33	1	3	27	3	14	19	11	36	17
B3	46.92	1	1	6	0	0	0	4	5	21	10	30	16
B4 (Blue Route)	75.26	2	2	11	1	4	25	8	11	23	12	42	19
C1 (Purple Route)	55.98	0	0	2	0	0	0	2	4	34	5	40	11
C2	58.53	0	< 1	4	0	0	0	0	8	28	5	36	8
C3	57.9	0	< 1	4	0	0	0	2	10	39	6	51	9
C4 (Blue Route)	28.61	0	< 1	4	0	0	0	0	8	14	4	22	6
D1 (Purple Route)	9.06	1	3	13	0	0	0	0	3	4	2	7	2
D2	9.24	0	< 1	2	0	0	0	0	6	3	2	9	6

Route Segment	Length (mi)	National Hydrography Dataset Waterbodies			Public Water Inventory Basins			National Hydrography Dataset Watercourse Types			Impaired Streams	National Hydrography Dataset Watercourses	Public Water Inventory Streams
								Perennial Stream/River	Intermittent Stream/River	Other Watercourse Type			
		Crossing Count	Within right-of-way Area (ac)	Within Route Width Area (ac)	Crossing Count	Within right-of-way Area (ac)	Within Route Width Area (ac)	Crossing Count	Crossing Count	Crossing Count	Crossing Count	Crossing Count	Crossing Count
D3	10.1	1	3	13	0	0	0	0	5	4	2	9	2
D4 (Blue Route)	10.78	0	0	< 1	0	0	3	3	4	4	2	11	2
D5	10.86	0	0	1	0	0	3	3	4	7	2	14	2
D6	11.39	0	0	< 1	0	0	3	3	3	4	2	10	2
D7	12.76	0	0	< 1	0	0	3	3	2	4	2	9	2
E1 (Purple Route)	17.68	2	3	22	0	0	0	0	7	5	0	12	1
E2 (Blue Route)	16.55	2	2	9	0	0	2	0	2	2	1	4	1
F1 (Purple Route)	2.24	2	5	40	0	0	0	0	0	0	0	0	0
F2	2.28	2	4	15	0	0	0	0	0	0	0	0	0
F3	2.71	0	< 1	11	0	0	0	0	0	0	0	0	0
F4 (Blue Route)	2.7	2	3	14	1	1	5	0	0	0	0	0	0
F5	2.43	0	< 1	1	0	0	0	0	0	0	0	0	0
F6	2.65	0	< 1	6	0	0	0	0	0	0	0	0	0
F7	2.14	0	< 1	6	0	0	0	0	0	0	0	0	0
F8	2.69	0	< 1	1	0	0	0	0	0	0	0	0	0
G1 (Blue Route)	25.43	1	1	10	0	0	0	2	2	2	3	6	4
G2	24.63	1	1	26	0	0	10	2	2	2	3	6	4
G3 (Purple Route)	22.7	1	1	30	0	< 1	11	6	2	3	6	11	8
G4	25	1	1	27	0	< 1	11	3	2	3	2	8	4

Route Segment	Length (mi)	National Hydrography Dataset Waterbodies			Public Water Inventory Basins			National Hydrography Dataset Watercourse Types			Impaired Streams	National Hydrography Dataset Watercourses	Public Water Inventory Streams
								Perennial Stream/River	Intermittent Stream/River	Other Watercourse Type			
		Crossing Count	Within right-of-way Area (ac)	Within Route Width Area (ac)	Crossing Count	Within right-of-way Area (ac)	Within Route Width Area (ac)	Crossing Count	Crossing Count	Crossing Count	Crossing Count	Crossing Count	Crossing Count
G5	24.25	1	1	30	0	< 1	11	6	3	4	6	13	10
G6	22.74	1	1	30	0	< 1	11	6	2	3	6	11	8

556. There are no trout streams, state-designated outstanding resource value waters, or state and federal wild and scenic and recreational rivers crossed by the route segments in Region A.[556]

557. With the exception of Route Segment A2, waterbodies are present within the route width of all route segments in Region A. Further, one waterbody in Region A is designated as PWI basin. It is within the route width of Route Segment A4 but is not crossed by the Project.[557]

558. There are no trout streams crossed by the route segments in Region B.[558]

559. The Minnesota River is a state-designated outstanding resource value water and a state-designated wild and scenic river. All route segments in Region B cross the Minnesota River at points where existing transmission lines are present. Both crossing locations (the western crossing for Route Segments B1 [Purple Route], B2, and B3) and the eastern crossing (Route Segment B4 [Blue Route]) would – after some additional tree clearing – parallel existing transmission lines.[559]

560. There are no trout streams, state-designated outstanding resource value waters, or state and federal wild and scenic and recreational rivers crossed by the route segments in Region C. The major PWI watercourses crossed in Region C include the Crow River South Fork, Chetomba Creek, Hawk Creek, and Belle Creek.[560]

561. There are no trout streams crossed by the route segments in Region D. All route segments in Region D cross the Crow River, which is a state-designated outstanding resource value water and a state-designated wild and scenic river. The route width of each route segment within Region D includes one waterbody. All route segments

[556] Ex. EERA-12 at 215 (DEIS); FEIS at 225.
[557] Ex. EERA-12 at 215 (DEIS); FEIS at 225.
[558] Ex. EERA-12 at 259 (DEIS); FEIS 271.
[559] Ex. EERA-12 at 259 (DEIS); FEIS at 271.
[560] Ex. EERA-12 at 299-300 (DEIS); FEIS at 314-315.

in Region D cross two impaired watercourses, with the exception of Route Segment D2, which crosses six impaired watercourses.[561]

562. There are no trout streams, state-designated outstanding resource value waters, or state and federal wild and scenic and recreational rivers crossed by the route segments in Region E. Each route segment includes two waterbodies within its route width.[562]

563. Route segments in Region F cross watercourses, trout streams, state-designated outstanding resource value waters, and state-designated wild, scenic, and recreational rivers. Route Segments F1 (Purple Route), F2, and F4 (Blue Route) include two waterbodies within their route width.[563]

564. Two trout streams, Johnson Creek and Fairhaven Creek, are crossed by the route segments in Region G. Region G route segments also cross the Mississippi River, which is a state-designated outstanding resource value water and a state-designated wild, scenic, and recreational river. Fish Creek is also in Region G and is crossed by Route Segments G3 (Purple Route) and G4. Although Fish Creek is not designated as a PWI watercourse, according to testing conducted by Wright County Water and Soil, total Phosphorus is above 40 micrograms per liter and could meet the requirements of an impaired waterbody. All route segments, with the exception of Route Segment G4, cross a designated trout stream.[564]

565. The crossing distance for all watercourses and waterbodies in the Project area is less than 1,000 feet (the typical transmission line span for the Project). Accordingly, the Project can span all watercourses and waterbodies along the selected route without placing any structures into these waters.[565]

566. Removal of vegetation and soil cover could result in short-term water quality impacts due to increased turbidity. Likewise, construction of the line could result in a winnowing of riparian or shoreline forest areas within the right-of-way. These areas assist with water attenuation and decreasing erosion.[566]

567. Multiple comments were received regarding the Project's crossing of the Mississippi River. MDNR prefers a crossing of the Mississippi River that uses an existing crossing (the Purple Route (Route G3) or Route Segment 246).[567]

568. Xcel Energy, however, supports the Blue/Preferred Route crossing of the Mississippi River. It maintains that its proposed, new crossing better reduces impacts to residences; avoids and minimizes impacts to sensitive resources on the southwest side

[561] Ex. EERA-12 at 328-329 (DEIS); FEIS at 343-344.
[562] Ex. EERA-12 at 353 (DEIS); FEIS at 368.
[563] Ex. EERA-12 at 382 (DEIS); FEIS at 397.
[564] Ex. EERA-12 at 415 (DEIS); FEIS at 432-433.
[565] Ex. EERA-12 at 178 (DEIS); FEIS at 184.
[566] Ex. EERA-12 at 178–179 (DEIS); FEIS at 184.
[567] Xcel Energy Response to Hearing Comments (Dec. 13, 2024).

of the Mississippi River that would be crossed by the Purple Route (*i.e.*, the Fish Creek Basin area); and results in a better crossing of the North Fork of the Crow River (a wild and scenic riverway). Because MDNR "generally prefers utilizing pole structures for the Mississippi River crossing that place transmission lines side by side rather than stacked" because the configurations create fewer vertical planes for bird impacts, if the Blue/Preferred Route crossing is approved, Xcel Energy pledges to use a horizontal configuration in this area.[568]

569. To minimize impacts to watercourses and waterbodies, Xcel Energy would obtain a National Pollutant Discharge Elimination System Construction Stormwater permit from the MPCA for construction of the project. Such a permit requires development of a SWPPP that identifies construction management practices to minimize erosion and sedimentation. Under the terms of such a permit, additional best management practices would be required for construction work near special waters – including impaired waters and trout streams.[569]

3) Wetlands

570. The Project could temporarily or permanently impact wetlands if they cannot be avoided entirely by Project design. In most cases, wetlands can be spanned to avoid placing structures within the wetland. When a wetland cannot be spanned, construction would occur within the wetland.[570]

571. The National Wetlands Inventory (NWI), as updated by MDNR, identifies numerous wetland complexes and small isolated wetlands throughout the route widths studied in the EIS. In general, wetlands are more prevalent in the northeast portion of the Project compared to the southwest portion. All route segments would intersect wetlands.[571]

572. Calcareous fens are rare and distinctive peat-accumulating wetlands that receive groundwater that is rich in calcium and other minerals. One calcareous fen is located within five miles of the Purple Route; no fens are within five miles of either the Blue Route or the Preferred Route.[572]

573. In MDNR's comments on the DEIS, MDNR requested, and the Administrative Law Judge recommends, a special permit condition requiring Xcel Energy to work with the MDNR to determine if any impacts to the calcareous fen will occur during any phase of the Project.[573]

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[568] MDNR DEIS Comments at 2; Xcel Energy Response to Hearing Comments (Dec. 13, 2024).
[569] Ex. EERA-12 at 13, 179 (DEIS); FEIS at 13, 185.
[570] Ex. EERA-12 at 185 (DEIS); FEIS at 191.
[571] Ex. EERA-12 at 14 (DEIS); FEIS at 14.
[572] Ex. EERA-12 at 184 (DEIS); FEIS at 190; Ex. Xcel-19 at 8 (Langan Surrebuttal).
[573] FEIS at 193.

574. Table 7 below denotes the total acres of wetlands within the right-of-way and route width of each route segment.[574]

Table 7. National Wetland Inventory Wetlands

Route Segment	Length (mi)	All	Forested		Non-Forested		Total	
		Crossing (> 1,000 ft span) Count	Within right-of-way Area (ac)	Within Route Width Area (ac)	Within right-of-way Area (ac)	Within Route Width Area (ac)	Within right-of-way Area (ac)	Within Route Width Area (ac)
A1 (Purple Route)	17.49	0	1	17	7	68	8	85
A2	17.58	0	1	18	6	53	7	71
A3 (Blue Route)	14.59	0	2	11	6	43	7	55
A4	18.14	1	1	7	11	97	11	104
A5	15.11	0	1	13	8	52	9	65
A6	14.54	0	2	18	6	52	8	70
A7	14.56	0	2	16	5	45	7	61
B1 (Purple Route)	45.41	1	1	16	25	210	26	226
B2	51.03	0	3	25	21	189	24	214
B3	46.92	1	3	18	26	193	28	211
B4 (Blue Route)	75.26	4	4	46	49	453	53	499
C1 (Purple Route)	55.98	0	2	14	20	187	22	201
C2	58.53	2	4	20	34	215	38	234
C3	57.9	0	4	17	17	112	21	130
C4 (Blue Route)	28.61	0	2	9	17	112	20	121
D1 (Purple Route)	9.06	0	2	13	11	73	13	87
D2	9.24	0	2	14	8	70	10	83
D3	10.1	0	2	20	12	83	14	103
D4 (Blue Route)	10.78	0	2	12	7	57	9	69
D5	10.86	0	2	16	8	78	10	94

[574] Ex. EERA-12 at Appendix E (DEIS, Route Alternatives Data Analysis Tables); FEIS at Appendix E (Route Alternatives Data Analysis Tables).

Route Segment	Length (mi)	All	Forested		Non-Forested		Total	
		Crossing (> 1,000 ft span) Count	Within right-of-way Area (ac)	Within Route Width Area (ac)	Within right-of-way Area (ac)	Within Route Width Area (ac)	Within right-of-way Area (ac)	Within Route Width Area (ac)
D6	11.39	0	2	12	7	66	9	78
D7	12.76	0	1	13	7	57	8	70
E1 (Purple Route)	17.68	0	1	10	27	190	28	201
E2 (Blue Route)	16.55	1	4	33	29	224	33	257
F1 (Purple Route)	2.24	0	0	0	4	42	4	42
F2	2.28	0	1	6	4	27	6	32
F3	2.71	0	0	0	1	20	1	20
F4 (Blue Route)	2.7	0	0	0	4	29	4	29
F5	2.43	0	0	0	< 1	13	< 1	13
F6	2.65	0	0	0	1	19	1	19
F7	2.14	0	0	0	< 1	15	< 1	15
F8	2.69	0	0	0	< 1	13	< 1	13
G1 (Blue Route)	25.43	1	3	23	23	177	27	201
G2	24.63	1	3	24	20	189	23	213
G3 (Purple Route)	22.7	2	11	80	24	203	34	283
G4	25	2	7	72	28	260	35	332
G5	24.25	2	5	48	33	260	38	308
G6	22.74	1	2	29	23	201	25	230

575. The Project is designed to span wetlands where feasible, and substations would be sited to avoid impacts to wetlands. Where impacts to wetlands cannot be avoided by transmission line structures and clearing of trees within the 150-foot-wide right-of-way, other mitigation strategies are available; including:

- Scheduling construction during frozen conditions;
- Using construction mats when construction during frozen conditions is not feasible;

- Using all-terrain construction equipment that is designed to minimize soil impact in damp areas;

- Using the shortest route to the pole location; and

- Assembling structures in upland areas, when feasible, before they are brought to the site for installation.[575]

4) Impaired Waters

576. As part of its duties under the federal Clean Water Act, the MPCA is responsible for assessing water quality in Minnesota's waters and maintaining a listing of impaired waters.[576]

577. Impaired waters are crossed by the Purple and Blue Routes. Most of the impairments in such waters follow from: poor quality of aquatic life; mercury contamination of fish; sediment; bacteria; insecticides; and nutrient eutrophication. Of the impaired waters crossed by the Project, the impairments are turbidity and high volumes of suspended solids.[577]

578. Impacts to impaired waters can follow from the soils in areas that are disturbed during construction being washed by stormwater into adjacent waters on rainy days. Because of the commitment to employ familiar stormwater control measures, no significant or lasting impacts to water quality conditions are forecasted.[578]

579. Indeed, the very same best management practices that protect surface waters will also safeguard those waters that are already impaired.[579]

5) Floodplains

580. The Purple and Blue Routes cross 100-Year and 500-Year floodplains as designated by the Federal Emergency Management Administration (FEMA). Waterbodies associated with the 100-year floodplains that are crossed by the Project include the Mississippi River, Clearwater River, Crow River, Grove Creek, three unnamed perennial ditches, one unnamed intermittent ditch, Hawk Creek, Minnesota River, one unnamed stream, Yellow Medicine River, Threemile Creek, Redwood River, Meadow Creek, Half Moon Lake Creek, and Cottonwood River.[580]

581. FEMA-designated 500-Year floodplains are less prevalent and primarily located along wide, bottom-land terraces associated with large rivers along the route

[575] Ex. EERA-12 at 186 (DEIS); FEIS at 192; Ex. Xcel-2 at 171–172 (RP Application).
[576] *See* 33 U.S.C. § 1313.
[577] Ex. EERA-12 at 177 (DEIS); FEIS at 182; Ex. Xcel-2 at 169 (RP Application).
[578] Ex. Xcel-2 at 169 (RP Application).
[579] Ex. EERA-12 at 179 (DEIS); FEIS at 185.
[580] Ex. EERA-12 at 176 (DEIS); FEIS at 181-182.

options. Waterbodies associated with the 500-year floodplains crossed by the Project are the Minnesota River, one unnamed intermittent stream, and Meadow Creek.[581]

582. The Project is designed to span waterbodies and floodplains where practicable and to minimize the number of structures in surface water resources whenever these resources cannot be spanned. Impacts to floodplains during construction would include soil disturbance and removal of vegetation.[582]

583. There are approximately ten floodplain crossings that exceed 1,000 feet. Accordingly, the Project might require transmission line structures to be placed within a FEMA-designated floodplain. However, because of the "localized" contact between any transmission line structures and the broader floodplain, the placement of such structures is not estimated to alter the storage capacity of the underlying flood plain. No substation would be sited within a floodplain.[583]

584. Modest impacts to floodplains are anticipated to follow from construction and operation of the substations and no additional mitigation measures are proposed.[584]

vii. Flora

585. Vegetation resources across the Project are dominated by herbaceous agricultural vegetation and crops including corn, soybeans, potatoes, forage, and sugar beets. According to the National Landcover Database (NLCD), areas of natural vegetation (including wetlands) and native plant communities (such as prairies and forests) are scattered across the Project area. The highest concentrations of forested areas are in Region G, near the northern end of the Project.[585]

586. Construction of the Project would result in short-term impacts to existing vegetation, including localized physical disturbance and soil compaction. Construction activities involving the establishment and use of access roads, staging, and stringing areas would likewise have short-term impacts on vegetation. These impacts would follow from surface disturbances and equipment use.[586]

587. Construction would result in long-term impacts to vegetation by permanently removing high growing and forested vegetation from within the right-of-way. However, given the predominance of agricultural vegetation in the region, forest fragmentation from the Project is estimated to be minimal.[587]

588. Conversion from forest to open habitats in the right-of-way could have indirect impacts on native vegetation by altering environmental conditions, such as light

[581] Ex. EERA-12 at 176 (DEIS); FEIS at 182; Ex. Xcel-2 at 167-168 (RP Application).
[582] Ex. EERA-12 at 179 (DEIS); FEIS at 184.
[583] Ex. EERA-12 at 179 (DEIS); FEIS at 184.
[584] Ex. EERA-12 at 179 (DEIS); FEIS at 184.
[585] Ex. EERA-12 at 179, 182 (DEIS); FEIS at 187-188.
[586] Ex. EERA-12 at 182 (DEIS); FEIS at 188-189.
[587] Ex. EERA-12 at 182 (DEIS); FEIS at 188.

penetration. This could alter the vegetation community adjacent to the right-of-way and increase the potential spread of noxious weeds and other non-native species. Activities that could potentially lead to the introduction of noxious weeds and other non-native species include ground disturbance that leaves soils exposed for extended periods, introduction of topsoil contaminated with weed seeds, vehicles importing weed seed, and conversion of landscape type, particularly from forested to open settings.[588]

589. Most of the existing vegetation in the right-of-way across all of the regions consists of herbaceous agricultural vegetation. Table 8 below summarizes the landcover types within the right-of-way of each route segment.[589]

Table 8. Summary of landcover types within right-of-way (acres in right-of-way)

Region	Route Segment	Length (mi)	Agricultural (cultivated crops; hay and pasture)	Forest (upland and wetland)	Herbaceous (upland and wetland)	Developed (low-med-high intensity; open space)
A	A1 (Purple Route)	17.49	197	0	12	110
	A2	17.58	193	0	14	113
	A3 (Blue Route)	14.59	219	5	2	39
	A4	18.14	259	5	6	60
	A5	15.11	218	1	12	43
	A6	14.54	185	3	4	73
	A7	14.56	177	3	2	83
B	B1 (Purple Route)	45.41	665	2	30	127
	B2	51.03	695	1	24	203
	B3	46.92	615	2	27	208
	B4 (Blue Route)	75.26	1,082	7	50	225
C	C1 (Purple Route)	55.98	827	< 1	8	183
	C2	58.53	740	1	19	304
	C3	57.9	913	1	5	133
	C4 (Blue Route)	28.61	354	1	5	161

[588] Ex. EERA-12 at 182 (DEIS); FEIS at 188-189.
[589] Ex. EERA-12 at 14 and Appendix E (DEIS, Route Alternatives Data Analysis Tables); FEIS at 14 and Appendix E (Route Alternatives Data Analysis Tables).

Region	Route Segment	Length (mi)	Agricultural (cultivated crops; hay and pasture)	Forest (upland and wetland)	Herbaceous (upland and wetland)	Developed (low-med-high intensity; open space)
D	D1 (Purple Route)	9.06	129	1	3	30
	D2	9.24	128	1	2	38
	D3	10.1	148	< 1	4	29
	D4 (Blue Route)	10.78	152	< 1	5	39
	D5	10.86	152	1	5	40
	D6	11.39	151	< 1	5	51
	D7	12.76	186	1	3	42
E	E1 (Purple Route)	17.68	275	3	13	31
	E2 (Blue Route)	16.55	211	3	8	79
F	F1 (Purple Route)	2.24	20	1	< 1	17
	F2	2.28	27	1	1	12
	F3	2.71	39	< 1	< 1	8
	F4 (Blue Route)	2.7	46	< 1	1	1
	F5	2.43	27	1	< 1	17
	F6	2.65	44	< 1	0	2
	F7	2.14	17	1	< 1	21
	F8	2.69	35	1	0	14
G	G1 (Blue Route)	25.43	281	29	14	135
	G2	24.63	261	29	14	140
	G3 (Purple Route)	22.7	256	44	19	90
	G4	25	297	30	24	101
	G5	24.25	263	41	23	111
	G6	22.74	257	36	19	98

590. Mitigation and minimization measures needed to mitigate potential impacts to vegetation resources are familiar Commission route permit conditions and set forth in Section 5.3.10 of the Sample Route Permit.[590]

591. Xcel Energy filed a draft vegetation management plan with the RP Application.[591] No comments were provided on that plan as part of this proceeding.

592. Xcel Energy has committed to implementing mitigation measures to minimize the potential for introducing and spreading noxious weeds and invasive species.[592]

viii. Fauna

593. Wildlife in the vicinity of the Project is typical of those found in disturbed habitats in agricultural, rural and suburban areas. Watercourses, waterbodies and areas of natural vegetation – such as forests, wetlands, and open herbaceous areas – provide habitat for wildlife. Suitable habitat for migratory birds is present throughout the Project's landscapes. Typical wildlife species living along the route width include mammals (such as deer, fox, squirrels, and racoons); songbirds (such as robins and red-winged blackbirds); waterfowl (such as eagles and wood ducks); reptiles (such as garter snakes and painted turtles); amphibians (such as American toads and western chorus frogs); and aquatic biota (such as fish and mussels).[593]

594. Construction activities that generate noise, dust, or soil disturbances could result in short-term, indirect impacts to wildlife. During construction of the Project, wildlife would generally be displaced within and adjacent to the right-of-way and footprints of associated facilities – including the substations. Clearing and grading activities could also affect birds' eggs or nestlings and small mammals that cannot avoid equipment.[594]

595. Potential impacts to avian species could occur due to collision with transmission line conductors. The risk of collision is influenced by several factors including habitat, flyways, foraging areas and bird size.[595]

596. Several lands that are preserved or managed for wildlife and associated habitat are scattered throughout the Project's local vicinity, including MDNR Wildlife Management Areas, MDNR state game refuges, lakes that are part of MDNR Shallow Lakes Program, FWS Grassland Bird Conservation Areas, FWS Waterfowl Production Areas, and National Audubon Society Important Bird Areas.[596]

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[590] Ex. EERA-12 at Appendix F (DEIS, Sample Route Permit); FEIS at Appendix F (Generic Route Permit Template).
[591] Ex. Xcel-7 at Appendix K (RP Application, Draft Vegetation Management Plan).
[592] Ex. EERA-12 at 183–184 (DEIS); FEIS at 189-190.
[593] Ex. EERA-12 at 187 (DEIS); FEIS at 193-194.
[594] Ex. EERA-12 at 188 (DEIS); FEIS at 195.
[595] Ex. EERA-12 at 189 (DEIS); FEIS at 196.
[596] Ex. EERA-12 at 188 (DEIS) and Map 16 (Wildlife Resources); FEIS at 194 and Map 16 (Wildlife Resources).

597. Table 9 below summarizes the wildlife resources within the route width of each segment.[597]

Table 9. Wildlife Management and Conservation Areas within route width

Region	Route Segment	National Audubon Society Important Bird Areas (acres)	MDNR			FWS		Wildlife Action Network (acres)			
			Shallow Wildlife Lakes (count)	WMAs (acres)	Game Refuge (acres)	Grassland Bird Conservation Area (acres)	Waterfowl Production Areas (acres)	High or Medium-High Rank	Medium Rank	Low or Medium-Low Rank	Total
A	A1 (Purple Route)	0	0	1	0	540	0	39	4	1,529	1,572
	A2	0	0	1	0	282	0	39	4	1,288	1,332
	A3 (Blue Route)	0	0	0	0	0	0	37	225	830	1,092
	A4	0	1	25	0	439	0	35	224	777	1,037
	A5	0	0	0	0	404	0	35	155	822	1,011
	A6	0	0	0	0	0	0	54	229	684	967
	A7	0	0	0	0	0	0	55	231	715	1,001
B	B1 (Purple Route)	523	0	43	0	753	7	30	217	75	322
	B2	523	4	3	0	484	7	30	320	267	617
	B3	526	0	43	0	686	7	30	218	81	328
	B4 (Blue Route)	432	1	19	0	2,692	0	74	160	79	313
C	C1 (Purple Route)	0	0	21	0	1,058	42	0	0	0	0
	C2	0	1	0	0	416	72	0	0	0	0
	C3	0	1	20	0	0	72	0	0	0	0
	C4 (Blue Route)	0	1	0	0	0	72	0	0	0	0
D	D1 (Purple Route)	0	0	0	0	< 1	0	0	0	0	0

[597] Ex. EERA-12 at Appendix E (DEIS, Route Alternatives Data Analysis Tables); FEIS at Appendix E (Route Alternatives Data Analysis Tables).

Region	Route Segment	National Audubon Society Important Bird Areas (acres)	MDNR			FWS		Wildlife Action Network (acres)			
			Shallow Wildlife Lakes (count)	WMAs (acres)	Game Refuge (acres)	Grassland Bird Conservation Area (acres)	Waterfowl Production Areas (acres)	High or Medium-High Rank	Medium Rank	Low or Medium-Low Rank	Total
	D2	0	0	0	0	< 1	0	0	0	0	0
	D3	0	0	0	0	117	0	0	0	0	0
	D4 (Blue Route)	0	1	0	0	117	0	0	0	0	0
	D5	0	1	0	0	117	0	0	0	0	0
	D6	0	1	0	0	157	0	0	0	0	0
	D7	0	1	0	0	< 1	0	0	0	0	0
E	E1 (Purple Route)	0	1	2	0	892	0	0	0	0	0
	E2 (Blue Route)	0	2	2	0	1,481	81	0	148	2	150
F	F1 (Purple Route)	0	0	0	4	287	0	0	0	0	0
	F2	0	0	0	35	291	0	0	0	0	0
	F3	0	0	0	28	340	0	0	0	0	0
	F4 (Blue Route)	0	1	0	62	242	0	0	0	0	0
	F5	0	0	0	4	209	0	0	0	0	0
	F6	0	0	0	28	232	0	0	0	0	0
	F7	0	0	0	4	274	0	0	0	0	0
	F8	0	0	0	4	234	0	0	0	0	0
G	G1 (Blue Route)	0	0	0	238	1,807	0	0	0	0	0
	G2	0	0	0	194	1,784	51	0	0	0	0
	G3 (Purple Route)	0	0	0	155	1,964	0	36	158	158	352
	G4	0	0	0	44	1,662	0	36	158	158	352
	G5	0	0	0	190	2,145	0	36	158	158	352
	G6	0	0	0	161	1,958	0	36	158	158	352

598. To reduce the potential for avian electrocutions, Xcel Energy designs its transmission line facilities to comply with the guidance from the Avian Power Line Interaction Committee. Further, Xcel Energy will coordinate with MDNR and FWS to identify any wildlife migration pathways – particularly those avian flyways crossed by the route options. It will also identify and mark areas along the alignment to minimize avian interactions. Conductor marking devices – such as bird flight diverters or air navigational markers – will be installed to reduce avian deaths.[598]

599. Mitigation and minimization measures for potential impacts to avian species, including federally and state-protected avian species, are familiar Commission route permit conditions. They are included in Section 5.3.16 of the Sample Route Permit.[599]

ix. Effects on Natural Environment: Summary of Comparison of Route Alternatives

600. The Project crosses various soil types. Potential impacts would primarily be short-term and occur during construction. Xcel Energy will implement the mitigation measures described in the Route Permit Application to avoid or reduce these impacts. Impacts to soil are not estimated to differ materially among the route alternatives.[600]

601. Route alternatives generally cross surface waters—most significantly, the Mississippi, Minnesota, and North Fork of the Crow Rivers. The Purple Route crosses the Mississippi and Minnesota Rivers following existing lines; the Blue/Preferred Route crosses the Mississippi River at a new location and the Minnesota River following an existing line. Although MDNR prefers the Purple Route's crossing of the Mississippi River, as noted above, Xcel Energy supports the Blue/Preferred Route's crossing of the Mississippi River because of reduced residential impacts, crossing at a narrow channel of the river and avoidance of sensitive resources on the southwest side of the Mississippi River. Moreover, while both the Preferred/Blue and Purple Routes cross the North Fork of the Crow Wing River along existing roads, the Preferred/Blue Route follows a state highway for this crossing and the Purple Route follows a local road.[601]

602. In Region A, the incorporation of Route Segment 202 (*i.e.*, Route A6) would reduce impacts to the Cottonwood River.[602]

603. In Region B, Route Segments 211 and 219 reduce impacts to the Cottonwood River. Xcel Energy prefers Route Segments 211 because Route Segment 219 (supported by MDNR) would require additional angle structures, with associated costs to ratepayers. Although supported by MDNR, Route Segment 214 is not supported

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[598] Ex. Xcel-2 at 60, 179 (RP Application).
[599] Ex. EERA-12 at 189 (DEIS) and Appendix F (Sample Route Permit); FEIS at 196, *see* Appendix F (Generic Route Permit Template).
[600] Xcel Energy Response to Hearing Comments (Dec. 13, 2024).
[601] *Id.*
[602] Ex. Xcel-16 at 16 (Langan Direct).

by the record because it would result in additional impacts to an existing BWSR easement.[603]

604. All route segments would intersect wetlands. Xcel Energy's Preferred Route includes 138 acres of NWI wetlands within its right-of-way, as compared to: 145 acres within the MDNR proxy end-to-end route; 152 acres within the Blue Route; and 135 acres within the Purple Route.[604]

605. Most of the existing vegetation in the right-of-way across all of the route regions consists of herbaceous agricultural vegetation. Forested vegetation is limited, with most route segments having one acre or less within their rights-of-way. Forested vegetation is most abundant in Region G.[605]

606. As noted above, among the route alternatives analyzed, wildlife were typical of those found in disturbed habitats in agricultural, rural and suburban areas.[606]

607. Impacts on the natural environment with respect to air quality, climate change, geology, topography, floodplains, and groundwater do not vary significantly among route alternatives analyzed.[607]

608. The FEIS states that the Commission could require that independent environmental monitors, who report directly to EERA staff, monitor project construction and restoration. The Applicant could be required to pay for the costs of the environmental monitors. Section 5.3.3 of the Draft Route Permit includes this condition.[608]

F. Effects on Rare and Unique Natural Resources

609. Minnesota's HVTL routing factors require consideration of the Project's effect on rare and unique natural resources.[609]

610. Rare and unique natural resources encompass protected species and sensitive ecological resources. The EIS evaluated potential impacts to protected species by reviewing documented occurrences of these species within one mile of the Project area. The EIS also evaluated potential impacts to sensitive ecological resources, which could provide suitable habitat for protected species, by assessing the presence of these resources within the route width.[610]

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[603] *Id.*, Schedule 2 at 6 (Langan Direct).
[604] Xcel Energy Response to Hearing Comments (Dec. 13, 2024).
[605] Ex. EERA-12 at 15 (DEIS); FEIS at 14.
[606] Ex. EERA-12 at 15 (DEIS); FEIS at 14.
[607] Ex. EERA-12 at 7 (DEIS); FEIS at 7.
[608] FEIS at 74 and Appendix F at 5.3.3.
[609] Minn. Stat. § 216E.03, subd. 7(b)(1); Minn. R. 7850.4100(F).
[610] Ex. EERA-12 at 163 (DEIS); FEIS at 168.

i. Protected Species

611. The FWS Information for Planning and Consultation tool was queried on June 3, 2024, for a list of federally threatened and endangered species, proposed species, candidate species, and designated critical habitat that could be present within the vicinity of the Project. This query identified six federal species that could potentially be within the Project area: northern long-eared bat (*Myotis septentrionalis*; endangered), prairie bush clover (*Lespedeza leptostachya*; threatened), tricolored bat (*Perimyotis subflavus*; proposed endangered), salamander mussel (*Simpsonaias ambigua*; proposed endangered), monarch butterfly (*Danaus plexippus*; candidate), and whooping crane (*Grus americana*; experimental population, non-essential). Because the Project does not traverse federally designated critical habitats, impacts to protected species are estimated to be minimal.[611]

612. The MDNR's Natural Heritage Inventory System database was queried in June 2024 (Barr License Agreement LA-2022-008), to determine if any state endangered, threatened, or special concern species have been documented within one mile of the Project area. The database identified records for seven endangered, 11 threatened, and 28 special concern species within one mile of the Project area. Some state threatened and endangered species have been documented within the right-of-way of various route segments within the regions, including the state and federally endangered Poweshiek skipperling butterfly (*Oarisma Poweshiek*; in Region A); state endangered king rail bird (*Rallus elegans*; Region B); three state threatened mussel species: mucket (*Actinonaias ligamentina*; in Region B), spike (*Eurynia dilatate*; in Region B), and fluted-shell (*Lasmigona costata*; in Region B); and the state threatened Blanding's turtle (*Emydoidea blandingii*; in Regions F and G).[612]

613. The primary method of reducing potential impacts to federally and state protected species is to avoid routing through habitat used by these species. When that is not practicable, impacts can be mitigated by working with the FWS and the MDNR on implementing specie-specific (or type-specific) management practices.[613]

ii. Sensitive Ecological Resources

614. The MDNR Conservation Explorer tool was used to assess the presence of sensitive ecological resources within the Project area. Some of these sensitive ecological resources intersect the right-of-way or are crossed by various route segments within the regions – including Sites of Biodiversity Significance (Regions A, B, C, E, and G), native plant communities (Regions A, B, and C), railroad rights-of-way (Regions B and C), prairie bank easements (Regions A and B), and Lakes of Biological Significance (Region B).[614]

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[611] Ex. EERA-12 at 164, 168 (DEIS); FEIS at 169, 173.
[612] Ex. EERA-12 at 12, 164-165 (DEIS), and Appendix M (Threatened and Endangered Species); FEIS at 12, 169, 171, and Appendix M (Threatened and Endangered Species).
[613] Ex. EERA-12 at 170 (DEIS); FEIS at 175.
[614] Ex. EERA-12 at 164-166 and Map 12 (Sensitive Ecological Resources) (DEIS); FEIS at 169, 171 and Map 12 (Sensitive Ecological Resources).

615. The MDNR designates Scientific and Natural Areas to protect natural features with exceptional scientific or educational value. These include native plant communities, populations of rare species and geologic features. The primary means of reducing impacts to sensitive ecological resources is avoiding routing and spanning these communities. In this case, no Project route width intersects a Scientific and Natural Area. Moreover, Xcel Energy's plan to follow existing rights-of-way and division lines (such as roads, existing transmission lines and field lines) reduces the potential for fragmentation of these resources.[615]

iii. Effects on Rare and Unique Natural Resources: Summary of Comparison of Route Alternatives

616. Protected species are potentially present within the route alternatives analyzed. Regardless of the route selected, Xcel Energy pledges to comply with requirements of state and federal agencies as to protected species, continue its coordination with those agencies on wildlife protection, and implement the best management practices set forth in the Route Permit Application.[616]

617. MDNR has established several classifications for sensitive ecological resources across the state; including Sites of Biodiversity Significance, native plant communities, railroad rights-of-way, prairie bank easements, and Lakes of Biological Significance. Some of these sensitive ecological resources intersect the right-of-way or are crossed by the anticipated alignments of various route segments. As described in the Route Permit Application, the Blue and Purple Routes were both developed to avoid sensitive resources. Further, as compared to the unmodified Blue Route, the Preferred Route reduces impacts to native plant communities and Sites of Biodiversity Significance.[617] Regardless of route selected, Xcel Energy will implement the best management practices as set forth in the Route Permit Application.

G. Application of Various Design Considerations

618. Minnesota's HVTL routing factors require consideration of the Project's applied design options that maximize energy efficiencies, mitigate adverse environmental effects, and could accommodate expansion of the transmission system in the area.[618]

619. The Project is designed to maximize the use of existing right-of-way. For example, the Green Route Segment, a new single-circuit 3.1-mile 345 kV transmission line between the existing Sherco Solar West will be co-located with applicant's existing Line 5651, occupying the open position on the existing double-circuit-capable structures. Thus, this Route Segment would not require additional right-of-way. The existing 150-foot right-of-way is sufficient to add a second circuit to Line 5651.[619]

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[615] Ex. EERA-12 at 168, 170 (DEIS); FEIS at 173, 175.
[616] *See generally* Ex. Xcel-2 at 225-28 (RP Application).
[617] Ex. Xcel-16 at 16 and Schedule 4 (Langan Direct).
[618] Minn. Stat. § 216E.03, subd. 7(b)(2); Minn. R. 7850.4100(G).
[619] Ex. EERA-12 at 18, 42–43, 48–51 (DEIS); FEIS at 18, 42-43, 49.

620. The Project is also designed to meet current and projected future needs of the local and regional transmission network.[620]

621. For the Garvin Substation, Xcel Energy secured purchase options with two landowners for a total of 160 acres that could be used for selecting the final 40–acre substation site. These parcels provide siting flexibility and sufficient setbacks from residences to accommodate future interconnections with wind generation sources.[621]

622. For the intermediate substation, Xcel Energy would seek to purchase property that is approximately 40 to 80 acres in size. Such parcels would be sufficient for both the substation footprint and acreage that could accommodate future line connections, including connections for new generators.[622]

623. The support substation would be a new 345 kV voltage substation approximately 80 miles south of the Sherco Solar West Substation, near the approximate midpoint of the transmission line. For this substation, Xcel Energy would seek to purchase property that is approximately 40 to 80 acres in size to accommodate the substation footprint and additional acreage that might be needed for transmission line connections.[623]

624. Xcel Energy has identified a proposed site with a willing landowner for the voltage support substation along the Preferred/Blue Route. The site is currently agricultural land and would not impact wetlands, conservation easements, forested areas, sensitive habitat or sensitive species. Xcel Energy stated that it is continuing landowner outreach to acquire a site for the voltage support substation on the Purple Route, to the extent the Purple Route is selected by the Commission.[624]

H. Use or Paralleling of Existing Rights-of-Way, Survey Lines, Natural Division Lines, and Agricultural Field Boundaries

625. Minnesota's HVTL routing factors require consideration of the Project's use of or paralleling of existing right-of-way, survey lines, natural division lines, and agricultural field boundaries.[625]

626. All route segments in Region A parallel existing division lines for 92 percent or more of their lengths.[626]

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[620] Ex. EERA-12 at 41–46 (DEIS); FEIS at 41-46.
[621] Ex. EERA-12 at 45 (DEIS); FEIS at 45.
[622] Ex. EERA-12 at 45 (DEIS); FEIS at 45.
[623] Ex. EERA-12 at 46 (DEIS); FEIS at 46.
[624] Xcel Energy DEIS comments at 7 (Nov. 25, 2024) (eDocket No. 202411-212383-01).
[625] Minn. Stat. § 216E.03, subd. 7(b)(9); Minn. R. 7850.4100(H).
[626] Ex. EERA-12 at 226 (DEIS); FEIS at 236.

627. All Route Segments in Region B parallel existing division lines for 91 percent or more of their lengths; except for Route Segment B1(Purple Route) (which parallels 54 percent of the length).[627]

628. All route segments in Region C parallel existing division lines for 89 percent or more of their lengths.[628]

629. All route segments parallel division lines for 79 percent or more of their lengths. Route Segment D2 parallels the largest amount of division lines (8.5 miles and 92 percent of its length).[629]

630. Route Segment E1 (Purple Route) parallels division lines for 15.6 miles and 88 percent of its length. Route Segment E2 (Blue Route) parallels division lines for 14.2 miles and 86 percent of its length.[630]

631. Route Segment F7 parallels the most existing roads (2.1 miles and 99 percent). Route Segments F1 (Purple Route), F2, and F5 parallel roads for between 60 and 72 percent of their length. Route Segments F3, F6, and F8 parallel a smaller percentage of roads (28 percent, 10 percent, and 48 percent, respectively). Route Segment F4 (Blue Route) does not parallel any road.[631]

632. All Route Segments in Region G parallel division lines for 85 percent or more of their length.[632]

633. All route options would parallel existing survey lines, natural division lines, or agricultural boundaries for the majority of their length (89 to 95 percent).[633]

I. Use of Existing Transportation, Pipeline, and Electrical Transmission System Rights-of-Way

634. Minnesota HVTL routing factors require consideration of the Project's use of existing transportation, pipeline, and electrical transmission system right-of-way.[634]

635. The only opportunity for right-of-way sharing and double-circuiting with existing transmission lines for the Project is the Green Route Segment, which adds a second circuit to the applicant's existing Line 5651 gen-tie line between the Sherco Solar West Substation and the Sherco Substation. As such, the Green Route Segment would not require any additional new right-of-way.[635]

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[627] Ex. EERA-12 at 271 (DEIS); FEIS at 282.
[628] Ex. EERA-12 at 309 (DEIS); FEIS at 324.
[629] Ex. EERA-12 at 337 (DEIS); FEIS at 352.
[630] Ex. EERA-12 at 362 (DEIS); FEIS at 377.
[631] Ex. EERA-12 at 391 (DEIS); FEIS at 406.
[632] Ex. EERA-12 at 425 (DEIS); FEIS at 443.
[633] Ex. EERA-12 at 467 (DEIS); FEIS at 486.
[634] Minn. Stat. § 216E.03, subd. 7(b)(8); Minn. R. 7850.4100(J).
[635] Ex. EERA-12 at 191 (DEIS); FEIS at 198.

636. Right-of-way sharing with railroads would not be feasible given the potential for AC interference. There is minimal opportunity (less than five miles) for right-of-way sharing with pipelines. Moreover, right-of-way sharing with pipelines would require further studies to understand potential AC interference impacts.[636]

637. Some members of the public provided comments supporting following existing transmission line or road rights-of-way. However, other members of the public also commented on the potential to increase Project impacts by following existing rights-of-way. In particular, for example, while some members of the public expressed support for paralleling the existing CapX line where possible, other landowners crossed by CapX opposed the addition of another transmission line right-of-way in the same area.[637]

638. Xcel Energy's Preferred Route and the MDNR proxy route following existing rights-of-way or parcel, section, and division lines for approximately 91 percent of their length, as compared to approximately 89 percent for the Blue and Purple Routes.[638]

J. Electrical System Reliability

639. Minnesota's HVTL routing factors require consideration of the Project's impact on electrical system reliability.[639]

640. The North American Electric Reliability Corporation (NERC) has established mandatory reliability standards for American utilities. For new transmission lines, these standards require the utility to evaluate whether the grid would continue to operate adequately under various contingencies. Two contingency categories apply to the Project. Under Category C, NERC requires utilities to analyze the consequences of a single storm or other event that causes simultaneous outages of both circuits on a double-circuit transmission line. Additionally, the Category D contingencies are loss of all transmission lines along a common right-of-way and loss of an entire voltage level at a substation. The effects of these contingencies on the system, and the transmission system's ability to serve load, must be monitored and managed by utilities. Route permits issued by the Commission require permittees to comply with NERC standards.[640]

641. Line crossings are when one transmission line crosses over another transmission line, placing the conductors of one transmission line physically over the conductors of the other transmission line. When line crossings occur, there is a risk it can

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[636] Ex. EERA-12 at 191 (DEIS); FEIS at 198-199.
[637] *See* Public Comments (R. and D. Schabel) (Nov. 25, 2024) (eDocket No. 202411-212380-01); Public Comments (K. Sharkey) (Nov. 12, 2024) (eDocket No. 202411-211805-01).
[638] Xcel Energy Response to Hearing Comments at 19 (Dec. 13, 2024). These values do not include the Green Segment, which follows an existing right-of-way for its entire length.
[639] Minn. Stat. § 216E.03, subd. 7(b)(5)–(6); Minn. R. 7850.4100(K).
[640] Ex. EERA-12 at 192 (DEIS); FEIS at 199.

impact system reliability. The number of new crossings should be limited to the extent practicable.[641]

642. The outage of one line can result in an outage of the second line at the same time, thereby reducing system resiliency. It can also result in structural damage to both transmission lines complicating repairs and increasing restoration times. Line crossings also create safety concerns because under normal operating conditions, one line may need to remain energized while maintenance work is occurring on the other transmission line at the same location. Taking multiple circuits out of service can stress the remaining system components, create overloads and voltage issues, and potentially undermine system stability if another system element fails during this time. Because of the safety and reliability impacts of crossings, good utility practice is to minimize new line crossings when routing new high voltage transmission lines.[642]

643. High voltage transmission lines are designed to be highly reliable. The design for the Project consists of concrete foundations, steel structures, twisted pair conductors and shield wire for lighting protection. As detailed in the Direct Testimony of Xcel Energy Transmission Planner, Jason Standing, circuits that cross over one another present operational and maintenance challenges. In such a circumstance, both lines may need to be removed from service for a maintenance crew to work safely on the lines. For all of these reasons, Xcel Energy has sought to minimize the number of times the project crosses other high voltage transmission lines.[643]

644. In developing possible routes, Xcel Energy analyzed whether these routes created reliability concerns. Overall, the Project supports and enhances the reliability of the regional electrical system.[644]

645. The Preferred Route, Blue Route, and MDNR proxy route would each require 12 crossings of existing transmission lines 115-kV or greater. The Purple Route would require 23 such crossings.[645]

646. The Project is a result of Xcel Energy's IRP. The IRP, among other things, reinforces system reliability. The Project would interconnect new generation to the Sherco Substation which is then connected to the larger Eastern Interconnection Grid. Xcel Energy plans its system jointly with Northern States Power Company, covering the portions of the states of North Dakota, South Dakota, Minnesota, Wisconsin, and Michigan (the NSP System). The Project would interconnect generation to serve the NSP System in the Upper Midwest and beyond the metropolitan area.[646]

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[641] Ex. EERA-12 at 193 (DEIS); FEIS at 200; Ex. Xcel-18 at 7 (Standing Direct).
[642] Ex. Xcel-18 at 7 (Standing Direct).
[643] Ex. EERA-12, Appendix O at Supplemental Information Inquiry #4 (DEIS, Supplemental Information Inquiry Responses); FEIS at Appendix O at Supplemental Information Inquiry #4.
[644] Ex. EERA-12 at 193 (DEIS); FEIS at 200.
[645] Xcel Energy Response to Hearing Comments at 31 (Dec. 13, 2024).
[646] FEIS at 201.

i. Reliability: Summary of Comparison of Route Alternatives

647. Regardless of the route selected, Xcel Energy will construct and operate the Project consistent with applicable requirements and standards.[647]

648. Xcel Energy's Preferred Route minimizes reliability risks with respect to crossings of existing lines. The Purple Route (including its crossing of the Mississippi River) has approximately twice as many line crossings as the Preferred Route.[648]

K. Costs of Constructing, Operating, and Maintaining the Facility

649. Minnesota's HVTL routing factors require consideration of the Project's cost of construction, operation, and maintenance.[649]

650. Xcel Energy developed route-specific costs based on the estimates developed for the CN Application for a 160- to 180-mile-long route. There are several main components of the cost estimates, including (1) transmission line structures and materials; (2) transmission line construction and restoration; (3) transmission line permitting and design; (4) transmission line and substation right-of-way acquisition; and (5) substation materials, permitting, design, and construction. Each of these components also includes a risk contingency and financing expenses.[650]

651. In the CN Application, Xcel Energy estimated that construction of the Project, along with substation construction and all substation equipment, including STATCOMs and series compensation, at $1.14 billion. This cost estimate was developed specifically for the Purple Route and Blue Route proposed in the RP Application and represents the sum of the expenditures over the life of the Project.[651]

652. Project cost estimates are affected by multiple factors – including land values, anticipated distribution relocations, transmission crossings, and commodity prices. The final Project costs will be dependent upon additional factors, including the final route, soil conditions, and materials pricing.[652]

653. The estimated total Project costs for the Preferred Route range from $1.274 billion to $1.302 billion, including escalation and AFUDC. These costs include all transmission line costs, right-of-way costs, risk contingencies for the transmission line and cost for substation modifications at the Sherco Solar West, Sherco, Voltage Support, Intermediate, and Garvin substations. The transmission line is expected to cost approximately $4.4 million per mile (including land acquisition).[653]

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[647] *See generally* Ex. Xcel-2 at 225-28 (RP Application).
[648] Ex. Xcel-16 at Schedule 4 (Langan Direct); FEIS at 200 and Table 5-18.
[649] Minn. R. 7850.4100(L).
[650] Ex. EERA-12 at 56 (DEIS); FEIS at 56.
[651] Ex. EERA-12 at 57 (DEIS); FEIS at 57.
[652] Ex-Xcel-17 at 4 (Samuel Direct).
[653] *Id.*; Ex-Xcel-20 at 4 (Samuel Surrebuttal).

654. Annual inspections are the principal operating and maintenance cost. The aerial inspections cost approximately $35 to $55 per mile, and the ground inspections cost approximately $200 to $400 per mile. Actual line-specific maintenance costs depend upon the setting, the amount of vegetation management that is necessary, storm damage occurrences, structure types, materials used, and the age of the line.[654]

655. The estimated costs vary between each alternative due to the differences in the following variables:

- Terrain – topographic changes along a route can impact transmission structure spacing and height which can impact transmission costs.

- Alignment – the alignment of a HVTL can have an impact on transmission construction costs. Linear alignments are more economical to construct. Introduction of angles and corner structures have additional costs.

- Soil Conditions – the type of soil can impact the size of a foundation or potential for specialty foundations needed to support the transmission structures.

- Micro-routing to avoid specific features– site specific routing modifications to avoid specific human or environmental features can also have an impact to transmission costs.

- Existing Transmission Crossings – crossing of existing HVTLs can impact the number of transmission structures and height required for a crossing. Each line crossing needs to be reviewed for safe operations of the existing and new HVTL.

- Pipeline & Railroads – construction of high voltage HVTLs in close proximity to pipelines or railroads might require AC induction mitigation. The cost of mitigation would be dependent on the amount of AC induction and acceptable mitigation measures by the pipeline company or railroad.

- Distribution Line Relocation – If a HVTL is routed in the same location as an existing electric distribution line, the distribution line might need to be relocated so it does not interfere with the operation and maintenance of the new HVTL.

- Material Pricing – market fluctuations in material pricing can have a substantial impact to the cost of transmission projects.

[654] Ex. EERA-12 at 58 (DEIS); FEIS at 58.

- Right of Way – Changes in land values between Project proposal and easement acquisition and the number of voluntary easements would affect Project costs.

- Specialized construction practices & mitigation – areas which require specialized construction or avoidance/minimization measures can also increase costs to the extent they require additional equipment, etc. (for example - matting).

- Length – The overall length of a HVTL can impact the overall cost. However, a longer, straight HVTL using single, tangent structures can be less expensive than a shorter line that includes double angle structures, poor soils, and other cost escalating features.[655]

i. Costs: Summary of Comparison of Route Alternatives

656. The cost of the Preferred and Blue Routes compares favorably to the other end-to-end routes analyzed.[656]

657. In its Response to Hearing Comments, Xcel Energy estimated the following costs for the route analyzed in the DEIS, as well as the Applicant's Preferred Route and an end-to-end route based on MDNR's route preferences.[657] Table 10 reflects those cost estimates.

Table 10

	Preferred Route	MDNR Route	Blue Route	Purple Route	Route Option C	Route Option D
Total (rounded to nearest million)	$773 million	$802 million	$767 million	$787 million	$815 million	$805 million

[655] Ex. EERA-12 at 193–94 (DEIS); FEIS at 202-203; *see also* Xcel Energy Response to Hearing Comments at Attachment A (Dec. 13, 2024).
[656] *See* Table 10 *infra*.
[657] *Id*. *See* Xcel Energy Response to Hearing Comments at 31 (Dec. 13, 2024); Ex. Xcel-20 at Schedule 1 (Samuel Surrebuttal). The cost figures in this table differ from the values in the DEIS; as described in the Surrebuttal Testimony of Joseph Samuel, the DEIS values appear to be based solely on a cost per mile. However, the DEIS values do not account for the additional variables that impact the cost of a route, although Xcel Energy conducted this analysis. Further, Xcel Energy has since updated the estimated cost per mile for the Project. The values above do not reflect those updates, but Xcel Energy anticipates that the cost update would affect the route alternatives by generally the same magnitude. See Ex. Xcel-20 at 5 and Schedule 1 (Samuel Surrebuttal).

L. Adverse Human and Natural Environmental Effects that Cannot be Avoided

658. Minnesota's HVTL routing factors require consideration of the adverse human and natural environmental effects that cannot be avoided.[658]

659. Transmission lines are infrastructure projects that have some impacts to humans and the environment that are unavoidable. These impacts are unavoidable because they cannot be avoided even with mitigation strategies. Unavoidable adverse impacts associated with construction of the proposed Project include possible traffic delays and fugitive dust on roadways; visual and noise disturbances; potential impacts to agricultural operations such as crop losses, soil compaction and erosion, and vegetative clearing; changes to forested wetland type and function; disturbance and temporary displacement of wildlife, as well as impacts to wildlife inadvertently struck during structure construction, minor amounts of habitat loss; converting the underlying land use to an industrial use (substation locations); and GHG emissions.[659]

660. Unavoidable adverse impacts associated with the operation of the proposed project include visual impact of structures, conductors, and substations; change in landscape character at the substation locations; loss of land use for other purposes, such as agriculture, where structures and the substations are placed; injury or death of avian species that collide with, or are electrocuted by, conductors; and maintenance-related trimming of tall-growing vegetation. [660]

M. Irreversible and Irretrievable Commitments of Resources

661. Minnesota's HVTL routing factors require consideration of the irreversible and irretrievable commitments of resources that are necessary for the Project.[661]

662. Resource commitments are irreversible when it is impossible, or very difficult, to redirect that resource to a different future use. An irretrievable commitment of resources means the resource is not recoverable for later use by future generations.[662]

663. Irreversible impacts include the land that is required to construct the transmission line. Certain land uses within the right-of-way will no longer be able to occur, especially at the substation. While it is possible that the right-of-way could be restored to previous conditions, this is unlikely to happen in the reasonably foreseeable future (approximately 50 years). The loss of forested wetlands is considered irreversible, because replacing these wetlands would take a significant amount of time.[663]

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[658] Minn. Stat. § 216E.03, subd. 7(b)(6); Minn. R. 7850.4100(M).
[659] Ex. EERA-12 at 449 (DEIS); FEIS at 468.
[660] Ex. EERA-12 at 449 (DEIS); FEIS at 468.
[661] Minn. Stat. § 216E.03, subd. 7(b)(11); Minn. R. 7850.4100(N).
[662] Ex. EERA-12 at 450 (DEIS); FEIS at 469.
[663] Ex. EERA-12 at 450 (DEIS); FEIS at 469.

664. Irretrievable impacts are primarily related to Project construction – including the use of water, aggregate, hydrocarbons, steel, concrete, wood, and other consumable resources. The commitment of labor and fiscal resources is also considered irretrievable. However, the estimated Project construction cost assumes Xcel Energy would pay prevailing wages for applicable positions during Project construction.[664]

N. Impacts to Allodial Rights

665. Approximately two hundred landowners residing in or near the Project Area filed Notices declaring "that all lands in Minnesota are allodial and are free from having statutory conditions or public land re-use pertain to them as they exist under private property rights with the sole ownership of said land by the People." These Notices further assert that "allowing declaration of an unlawful alternative public land use of private land rights" is "causing interference to private property rights and land use" and "can be construed as warring against the Constitutions with full knowledge, malice, and intent."[665]

666. The Administrative Law Judge disagrees. First, the Allodial Lands clause of our Constitution (*see* Minn. Const. art. I, § 15) is a limited guarantee. It preserves the right of a landowner to transfer property and for the owner's grantee to receive that transfer.[666]

667. It does not, as the Minnesota Court of Appeals recently held, prevent the holder of an easement over land from using the rights conferred by the easement.[667]

668. Second, the power of state government to obtain easements over property for public uses is as old as our state – including uses by corporations that operate as common carriers for the public under a tariff, such as electric utilities. Minnesota's first constitution provided:

> Lands may be taken for public way, for the purpose of granting to any corporation the franchise of way for public use. In all cases, however, a fair and equitable compensation shall be paid for land, and the damages arising from the taking of the same; but all corporations being common carriers, enjoying the right of way in pursuance of the provisions of this section, shall be bound to carry the mineral, agricultural and other productions or manufactures on equal and reasonable terms.[668]

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[664] Ex. EERA-12 at 193, 450 (DEIS); FEIS at 201, 469.
[665] See eDocket Nos. 20251-214501-01; 20251-214454-01; 20251-214070-01; 20251-213909-01; 20251-213853-01; 20251-213782-01; 20251-213694-01.
[666] See *e.g., State v. Register of Deeds of Ramsey Cnty.*, 6 N.W. 337, 338 (Minn. 1880).
[667] *Wilmes v. City of St. Paul,* A11-589, 2012 WL 171390, slip op. at *3 (Minn. Ct. App. Jan. 23, 2012) (unpublished) (because the City held an easement over Wilmes' property, it was entitled to prevent removal of trees within the easement, notwithstanding the Allodial Lands clause of the state constitution).
[668] Minn. Const. art. X, § 4 (1857).

669. This is still our law today.[669] Ownership claims in allodial land do not reduce or eliminate the Commission's power to grant a transmission line routing permit.

O. Summary.

670. Table 17-2 of the DEIS and Table 17-2 of the FEIS provide a comparison of the Blue and Purple Routes, and Route Options C and D, using the routing criteria analyzed in the DEIS.[670]

671. In its Response to Hearing Comments, Xcel Energy also provided a comparison of Xcel Energy's Preferred Route, the Blue Route, the Purple Route, and a proxy MDNR end-to-end route. The table included in Xcel Energy's comments is replicated below for ease of reference. Xcel Energy acknowledges that the table does not include a comparison of every resource category. Instead, it includes the criteria as to which there are material differences among the routes.[671]

Table 11

	Xcel Energy Preferred Route	MDNR Route	Blue Route	Purple Route
Mileage	175	175	174	171
Residences 0-75 feet	0	0	0	0
Residences 76-150 feet	16	13	16	19
Residences 151-300 feet	72	82	72	72
Residences 301-500 feet	58	77	57	68
Total residences 0-500 feet	146	172	145	159
BWSR easements crossed by right-of-way (number)	6	8	6	7
NWI wetlands within right-of-way (acres)	138	145	152	135
Following existing right-of-way, parcel, section, division lines (percent)	91	91	89	89
Crossings of existing transmission lines 115-kV or greater (number)	12	12	12	23

669 *Compare id.* with Minn. Const. art. XIII, § 4 (2024).
670 Ex. EERA-12 at 461–463, Table 17-2 (DEIS); FEIS at 480-482, Table 17-2.
671 Ex. EERA-12 at Table 17-2 (DEIS); FEIS at Table 17-2.

Estimated cost (rounded to nearest million)	$773 million	$802 million	$767 million	$787 million

672. It should be noted that mileage estimate, and the percentage of right-of-way followed, listed above does not include the Green Segment.[672]

673. The Preferred Route is consistent with the Commission's routing criteria and best balances and minimizes potential impacts, considering each of those criteria (including, but not limited to, residential impacts, natural resources, reliability, and cost). The Blue Route, Purple Route, and an MDNR route may offer benefits as to one routing factor or another, but each invite countervailing negative impacts on other factors.[673]

XI. CONSIDERATION OF ISSUES PRESENTED BY STATE AGENCIES AND LOCAL UNITES OF GOVERNMENT

674. Minn. Stat. § 216E.03, subd. 7(b)(12) (2024) requires the Commission to examine, when appropriate, issues presented by federal, state and local agencies. The issues presented by these agencies are addressed in the findings above as part of the analysis of the various routing factors.[674]

XII. DRAFT ROUTE PERMIT

675. Xcel Energy proposes revisions to the Draft Route Permit to reflect Project-specific details and reflect anticipated construction timelines and procedures for the Project. Specifically, Xcel Energy proposes revisions to the following sections of the Draft Route Permit: 4, 5, 5.3.1, 5.3.11, 9.1, and 9.2. Xcel Energy also proposes two new special conditions: 6.1 (regarding vegetation removal prior to a plan and profile submission), and 6.2 (regarding substation construction). In its Response to Hearing Comments, Xcel Energy detailed the reason for each of its requested revisions.[675]

676. The revisions to the Draft Route Permit requested by Xcel Energy in its December 2024 Response to Hearing Comments are reasonable, supported by the record and the Administrative Law Judge recommends their inclusion. With these additions, the revised Draft Route Permit would protect human life and environmental features in the Project area.[676]

XIII. NOTICE

677. Minnesota law requires an applicant for a Route Permit to provide certain notice to both the public and local units of government before and during the permitting

[672] Xcel Energy Response to Hearing Comments at 19 (Dec. 13, 2024).
[673] *Id., generally*.
[674] Xcel Energy Response to Hearing Comments at 34-35 (Dec. 13, 2024).
[675] *Id.* at 32-36.
[676] *Id*.

process. Xcel Energy provided the required notices to the public and to local units of government.[677]

678. Minnesota law also requires the EERA and the Commission to provide certain notice to the public throughout the Route Permit process. The EERA and the Commission provided the required notices to the public.[678]

XIV. ADEQUACY OF THE EIS

679. The Commission is required to determine the adequacy of the EIS.[679]

680. The EIS 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.

681. The EIS provides responses to the comments received during the draft environmental impact statement review process.[680]

682. The EIS was prepared in compliance with the procedures in parts 7850.1000 to 7850.5600.

683. Any Conclusions of Law more properly designated as Findings of Fact are hereby adopted as such.

Based upon the foregoing Findings of Fact and the record in this proceeding, the Administrative Law Judge makes the following:

CONCLUSIONS OF LAW

1. Any of the forgoing Findings of Fact more properly designated as Conclusions of Law are hereby adopted as such.

2. The Commission and the Administrative Law Judge have jurisdiction to consider the Applicant's Route Permit Application.

3. The Commission determined that the CN Application was substantially complete and accepted the CN Application on May 2, 2023.

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[677] Minn. Stat. § 216E.03, subd. 3a and 4; Minn. R. 7850.2100, subps. 2 and 4; Exs. Xcel-10 (Notice of Filing RP Application) and Xcel-12 (Compliance Filing – Rule 7850 Notice).
[678] Minn. Stat. § 216E.03, subd. 6; Minn. R. 7850.2300, subp. 2, .2500, subp. 2 and 7–9; Exs. PUC-2 (Notice of Comment Period on Application Completeness), PUC-4 (Notice of Public Information and EIS Scoping Meetings), PUC-7 (Notice of and Order for Hearing), and PUC-11 (Notice of Informational Meetings, Public and Evidentiary Hearings, and Availability of DEIS); Exs. EERA-8 (Notice of EIS Scoping Decision), and EERA-10 (*EQB Monitor* Notice).
[679] Minn. R. 7850.2500, subp. 10.
[680] FEIS at Appendix B.

4. The Commission determined that the RP Application was substantially complete and accepted the RP Application on January 16, 2024.

5. EERA has conducted an appropriate environmental analysis for the Project for purposes of these proceeding and the EIS satisfies applicable law, including Minn. R. 7849.0230 and Minn. R. 7850.2500.

6. The Applicant gave notice as required by Minn. Stat. § 216E.03, subds. 3a and 4; Minn. Stat. § 216E.04, subd. 4; Minn. R. 7850.2100, subps. 2 and 4; and Minn. R. Ch. 7829, as applicable.

7. The Commission or EERA gave notice as required by Minn. Stat. §§ 216B.243; 216E.03, subd. 6; Minn. R. 7849.0230; 7849.1400; 7850.2300, subp. 2; and 7850.2500, subps. 2 and 7-9.

8. EERA has conducted an appropriate environmental analysis for the Project for purposes of this Certificate of Need and Route Permit proceeding. The Final EIS satisfies Minn. R. 7849.0230 and Minn. R. 7850.2500.

9. Public hearings were conducted in communities along the proposed routes. The Applicant and the Commission gave proper notice of the public hearings, as required by Minn. Stat. §§ 216B.243, 216E.04, subd. 6. The public had the opportunity to appear at the hearings, submit written comments, or both.

10. All procedural requirements for processing the Certificate of Need and Route Permit have been met.

11. The record evidence demonstrates that the Project meets the criteria for the issuance of a Certificate of Need, as set forth in Minn. Stat. § 216B.243, subd. 3, and Minn. R. 7849.0120.

12. The record evidence demonstrates that the Applicant's Preferred Route satisfies the Route Permit criteria set forth in Minn. Stat. § 216E.03, subd. 7(a) and Minn. R. 7850.4100.

13. The record evidence demonstrates that the Applicant's Preferred Route is consistent with the standards and criteria in Minn. Stat. § 216E.03, subd. 7 and Minn. R. 7850.4000.

14. The record evidence demonstrates that the Applicant's Preferred Route is the best route alternative for the Project.

15. The record evidence demonstrates that constructing the Project along the Applicant's Preferred Route does not present a potential for significant and adverse

environmental effects as those terms are used in the Minnesota Environmental Rights Act and the Minnesota Environmental Policy Act.[681]

16. There is no feasible and prudent alternative to the construction of the Project. Further, the Project is consistent with, and reasonably required for, the promotion of public health and welfare. The project design and the Applicant's commitment to employ best practices during construction, reflects the standards of the Minnesota Environmental Rights Act and the state's concern over the quality of its air, water, land, and natural resources.

17. The Applicant's requested route widths are reasonable and appropriate for the Project.

18. The Applicant's request for a right-of-way generally of 150 feet, and up to 250 feet where specialty structures are used, for operation and maintenance of the double circuit 345 kV transmission line, is reasonable and appropriate.

19. The evidence in the record demonstrates that the general Route Permit conditions are appropriate for the Project, as modified by Section XII above.

20. The evidence in the record demonstrates that Xcel Energy's requested Certificate of Need condition regarding costs, is supported by DER and appropriate.

Based upon these Conclusions, the Administrative Law Judge makes the following:

RECOMMENDATION

Based upon these Findings of Fact and Conclusions of Law, the Administrative Law Judge recommends that the Commission issue a Certificate of Need and Route Permit for the Applicant's Preferred Route to Xcel Energy to construct and operate the Project and associated facilities in Sherburne, Stearns, Kandiyohi, Wright, Meeker, Chippewa, Yellow Medicine, Renville, Redwood, and Lyon counties in Minnesota, and that the permit include the draft route permit conditions amended as set forth in the Conclusions above.

THIS REPORT IS NOT AN ORDER AND NO AUTHORITY IS GRANTED HEREIN. THE MINNESOTA PUBLIC UTILITIES COMMISSION WILL ISSUE THE ORDER THAT MAY ADOPT OR DIFFER FROM THE PRECEDING RECOMMENDATION.

Dated: February 5, 2025

SUZANNE TODNEM
Administrative Law Judge

[681] *See* Minn. Stat. §§ 116B.01-116B.13, 116D.01-116D.11 (2024).

MINNESOTA
OFFICE OF
ADMINISTRATIVE
HEARINGS

PO Box 64620
Saint Paul, MN 55164-0620
mn.gov/oah

PH (651) 361-7900

February 5, 2025

See Attached Service List

Re: ***In the Matter of the Route Permit Application for the Minnesota Energy Connection Project in Sherburne, Stearns, Kandiyohi, Wright, Meeker, Chippewa, Yellow Medicine, Renville, Redwood, and Lyon Counties in Minnesota***
OAH 23-2500-39782
MPUC E-002/CN-22-131, E-002/TL-22-132

To All Persons on the Attached Service List:

Enclosed and served upon you is the Administrative Law Judge's **FINDINGS OF FACT, CONCLUSIONS OF LAW, AND RECOMMENDATION** in the above-entitled matter.

If you have any questions, please contact me at (651) 361-7845, samantha.cosgriff@state.mn.us, or via facsimile at (651) 539-0310.

Sincerely,

Samantha Cosgriff

SAMANTHA COSGRIFF
Legal Assistant

Enclosure
cc: Docket Coordinator

STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS
PO BOX 64620
600 NORTH ROBERT STREET
ST. PAUL, MINNESOTA 55164

CERTIFICATE OF SERVICE

In the Matter of the Route Permit Application for the Minnesota Energy Connection Project in Sherburne, Stearns, Kandiyohi, Wright, Meeker, Chippewa, Yellow Medicine, Renville, Redwood, and Lyon Counties in Minnesota	OAH Docket No.: 23-2500-39782 MPUC E-002/CN-22-131, E-002/TL-22-132

On February 5, 2025, a true and correct copy of the **FINDINGS OF FACT, CONCLUSIONS OF LAW, AND RECOMMENDATION** was served by eService, and United States mail, (in the manner indicated on the attached service list) to the following individuals:

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
1	Lisa	Agrimonti	lagrimonti@fredlaw.com	Fredrikson & Byron, P.A.		60 South Sixth Street Suite 1500 Minneapolis MN, 55402-4400 United States	Electronic Service		No	22-131 Official CC Service List
2	Mara	Ascheman	mara.k.ascheman@xcelenergy.com	Xcel Energy		414 Nicollet Mall Fl 5 Minneapolis MN, 55401 United States	Electronic Service		No	22-131 Official CC Service List
3	David	Bell	david.bell@state.mn.us		Department of Health	POB 64975 St. Paul MN, 55164 United States	Electronic Service		No	22-131 Official CC Service List
4	Todd	Boonstra	todd_boonstra@fws.gov	U.S. Fish and Wildlife Service		22274 615th Ave Litchfield MN, 55355 United States	Electronic Service		No	22-131 Official CC Service List
5	Generic	Commerce Attorneys	commerce.attorneys@ag.state.mn.us		Office of the Attorney General - Department of Commerce	445 Minnesota Street Suite 1400 St. Paul MN, 55101 United States	Electronic Service		No	22-131 Official CC Service List
6	Board of	Commissioners		Wright County		3650 Braddock Ave NE Ste 1200 Buffalo MN, 55313 United States	Paper Service		No	22-131 Official CC Service List
7	Water Programs	Coordinator	waterprograms.bwsr@state.mn.us		Minnesota Board of Water and Soil Resources	520 Lafayette Road N St. Paul MN, 55155 United States	Electronic Service		No	22-131 Official CC Service List
8	Brandon	Crawford	brandonc@cubminnesota.org	Citizens Utility Board of Minnesota		332 Minnesota St Ste W1360 St. Paul MN, 55101 United States	Electronic Service		No	22-131 Official CC Service List
9	George	Damian	gdamian@cleanenergyeconomymn.org	Clean Energy Economy MN		13713 Washburn Ave S Burnsville MN, 55337 United States	Electronic Service		No	22-131 Official CC Service List
10	Randall	Doneen	randall.doneen@state.mn.us		Department of Natural Resources	500 Lafayette Rd, PO Box 25 Saint Paul MN, 55155 United States	Electronic Service		No	22-131 Official CC Service List
11	Richard	Dornfeld	richard.dornfeld@ag.state.mn.us		Office of the Attorney General - Department of Commerce	Minnesota Attorney General's Office 445 Minnesota Street, Suite 1800 Saint Paul MN, 55101 United States	Electronic Service		No	22-131 Official CC Service List
12	Jim	DuBois	jrdubois@hotmail.com			null null, null United States	Electronic Service		No	22-131 Official CC Service List
13	Tim	DuBois				3494 160th Street South Haven	Paper Service		No	22-131 Official CC

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						MN, 55382 United States				Service List
14	Adam	Duininck	aduininck@ncsrcc.org	North Central States Regional Council of Carpenters		700 Olive Street St. Paul MN, 55130 United States	Electronic Service		No	22-131 Official CC Service List
15	Bret	Eknes	bret.eknes@state.mn.us		Public Utilities Commission	Suite 350 121 7th Place East St. Paul MN, 55101-2147 United States	Electronic Service		No	22-131 Official CC Service List
16	Kate	Fairman	kate.fairman@state.mn.us		Department of Natural Resources	Box 32 500 Lafayette Rd St. Paul MN, 55155-4032 United States	Electronic Service		No	22-131 Official CC Service List
17	Annie	Felix Gerth	annie.felix-gerth@state.mn.us			Board of Water & Soil Resources 520 Lafayette Rd Saint Paul MN, 55155 United States	Electronic Service		No	22-131 Official CC Service List
18	Sharon	Ferguson	sharon.ferguson@state.mn.us		Department of Commerce	85 7th Place E Ste 280 Saint Paul MN, 55101-2198 United States	Electronic Service		No	22-131 Official CC Service List
19	Todd	Green	todd.a.green@state.mn.us		Minnesota Department of Labor & Industry	443 Lafayette Rd N St. Paul MN, 55155-4341 United States	Electronic Service		No	22-131 Official CC Service List
20	Kari	Howe	kari.howe@state.mn.us		DEED	332 Minnesota St, #E200 1ST National Bank Bldg St. Paul MN, 55101 United States	Electronic Service		No	22-131 Official CC Service List
21	Breann	Jurek	bjurek@fredlaw.com	Fredrikson & Byron PA		60 S Sixth St Ste 1500 Minneapolis MN, 55402 United States	Electronic Service		No	22-131 Official CC Service List
22	Raymond	Kirsch	raymond.kirsch@state.mn.us		Department of Commerce	85 7th Place E Ste 500 St. Paul MN, 55101 United States	Electronic Service		No	22-131 Official CC Service List
23	Chad	Konickson	chad.konickson@usace.army.mil	U.S.Army Corps of Engineers		332 Minnesota St. Suite E1500 Saint Paul MN, 55101 United States	Electronic Service		No	22-131 Official CC Service List
24	Stacy	Kotch Egstad	stacy.kotch@state.mn.us		MINNESOTA DEPARTMENT OF TRANSPORTATION	395 John Ireland Blvd. St. Paul MN, 55155 United States	Electronic Service		No	22-131 Official CC Service List
25	Gretchen	Laakso				3494 160th St South Haven MN, 55382 United States	Paper Service		No	22-131 Official CC Service List

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
26	Kelly	Lagnese	kjlagnese@gmail.com			null null, null United States	Electronic Service		No	22-131 Official CC Service List
27	Andrew	Levi	andrew.levi@state.mn.us		Department of Commerce	85 7TH PLACE E SUITE 280 SAINT PAUL MN, 55011-2198 United States	Electronic Service		No	22-131 Official CC Service List
28	Terry	Louwagie	soybeanbeanbacker@gmail.com			2894 310th St Marshall MN, 56258 United States	Electronic Service		No	22-131 Official CC Service List
29	Dawn S	Marsh	dawn_marsh@fws.gov	U.S. Fish & Wildlife Service		Minnesota-Wisconsin Field Offices 4101 American Blvd E Bloomington MN, 55425 United States	Electronic Service		No	22-131 Official CC Service List
30	Carol A.	Overland	overland@legalectric.org	Legalectric - Overland Law Office		1110 West Avenue Red Wing MN, 55066 United States	Electronic Service		No	22-131 Official CC Service List
31	Paul	Pfeiffer	paulpf@atsinc.com			725 Opportunity Drive St. Cloud MN, 56303 United States	Electronic Service		No	22-131 Official CC Service List
32	Kevin	Pranis	kpranis@liunagroc.com	Laborers' District Council of MN and ND		81 E Little Canada Road St. Paul MN, 55117 United States	Electronic Service		No	22-131 Official CC Service List
33	Grant	Rademacher	grantr@rademacherco.com			7007 River Rd SE Clear Lake MN, 55319 United States	Electronic Service		No	22-131 Official CC Service List
34	Stephen	Rakow	stephen.rakow@state.mn.us		Department of Commerce	Suite 280 85 Seventh Place East St. Paul MN, 55101-2198 United States	Electronic Service		No	22-131 Official CC Service List
35	Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us		Office of the Attorney General - Residential Utilities Division	1400 BRM Tower 445 Minnesota St St. Paul MN, 55101-2131 United States	Electronic Service		No	22-131 Official CC Service List
36	Stephan	Roos	stephan.roos@state.mn.us		Minnesota Department of Agriculture	625 Robert St N Saint Paul MN, 55155-2538 United States	Electronic Service		No	22-131 Official CC Service List
37	Nathaniel	Runke	nrunke@local49.org			611 28th St. NW Rochester MN, 55901 United States	Electronic Service		No	22-131 Official CC Service List
38	Deborah	Schabel	deborah.schabel@gmail.com			15751 35th Ave South Haven MN, 55382 United States	Electronic Service		No	22-131 Official CC Service List

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
39	Christine	Schwartz	regulatory.records@xcelenergy.com	Xcel Energy		414 Nicollet Mall FL 7 Minneapolis MN, 55401-1993 United States	Electronic Service		No	22-131 Official CC Service List
40	Will	Seuffert	will.seuffert@state.mn.us		Public Utilities Commission	121 7th Pl E Ste 350 Saint Paul MN, 55101 United States	Electronic Service		No	22-131 Official CC Service List
41	Janet	Shaddix Elling	jshaddix@janetshaddix.com	Shaddix And Associates		7400 Lyndale Ave S Ste 190 Richfield MN, 55423 United States	Electronic Service		Yes	22-131 Official CC Service List
42	Bria	Shea	bria.e.shea@xcelenergy.com	Xcel Energy		414 Nicollet Mall Minneapolis MN, 55401 United States	Electronic Service		No	22-131 Official CC Service List
43	Andy	Simon	anysimon777@gmail.com			1511 Co. Rd. 45 South Haven MN, 55382 United States	Electronic Service		No	22-131 Official CC Service List
44	Madelyn	Smerillo	msmerillo@cleangridalliance.org	Clean Grid Alliance		570 Asbury St Suite 201 Saint Paul MN, 55104 United States	Electronic Service		No	22-131 Official CC Service List
45	Cindy	Stelten	cstelten@meltel.net			31 Cherry St S Kimball MN, 55353 United States	Electronic Service		No	22-131 Official CC Service List
46	Suzanne	Todnem	suzanne.todnem@state.mn.us		Office of Administrative Hearings	600 Robert Street North PO Box 64620 St. Paul MN, 55164 United States	Electronic Service		Yes	22-131 Official CC Service List
47	Jayme	Trusty	execdir@swrdc.org	SWRDC		2401 Broadway Ave #1 Slayton MN, 56172 United States	Electronic Service		No	22-131 Official CC Service List
48	Jen	Tyler	tyler.jennifer@epa.gov	US Environmental Protection Agency		Environmental Planning & Evaluation Unit 77 W Jackson Blvd. Mailstop B-19J Chicago IL, 60604-3590 United States	Electronic Service		No	22-131 Official CC Service List
49	Garrick	Valverde	garrick.valverde@apexcleanenergy.com	Apex Clean Energy		8665 Hudson Boulevard North Suite 200 Lake Elmo MN, 55042 United States	Electronic Service		No	22-131 Official CC Service List
50	Haley	Waller Pitts	hwallerpitts@fredlaw.com	Fredrikson & Byron, P.A.		60 S Sixth St Ste 1500 Minneapolis MN, 55402-4400 United States	Electronic Service		No	22-131 Official CC Service List
51	Cynthia	Warzecha	cynthia.warzecha@state.mn.us	Minnesota Department of Natural Resources		500 Lafayette Road Box 25 St. Paul MN,	Electronic Service		No	22-131 Official CC Service List

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
						55155-4040 United States				
52	Alan	Whipple	sa.property@state.mn.us		Minnesota Department Of Revenue	Property Tax Division 600 N. Robert Street St. Paul MN, 55146-3340 United States	Electronic Service		No	22-131 Official CC Service List
53	Jonathan	Wolfgram	jonathan.wolfgram@state.mn.us		Office of Pipeline Safety	445 Minnesota St Ste 147 Woodbury MN, 55125 United States	Electronic Service		No	22-131 Official CC Service List

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
1	Lisa	Agrimonti	lagrimonti@fredlaw.com	Fredrikson & Byron, P.A.		60 South Sixth Street Suite 1500 Minneapolis MN, 55402-4400 United States	Electronic Service		No	22-132Official CC Service List
2	Mara	Ascheman	mara.k.ascheman@xcelenergy.com	Xcel Energy		414 Nicollet Mall Fl 5 Minneapolis MN, 55401 United States	Electronic Service		No	22-132Official CC Service List
3	David	Bell	david.bell@state.mn.us		Department of Health	POB 64975 St. Paul MN, 55164 United States	Electronic Service		No	22-132Official CC Service List
4	Generic	Commerce Attorneys	commerce.attorneys@ag.state.mn.us		Office of the Attorney General - Department of Commerce	445 Minnesota Street Suite 1400 St. Paul MN, 55101 United States	Electronic Service		Yes	22-132Official CC Service List
5	Ian M.	Dobson	ian.m.dobson@xcelenergy.com	Xcel Energy		414 Nicollet Mall, 401-8 Minneapolis MN, 55401 United States	Electronic Service		No	22-132Official CC Service List
6	Randall	Doneen	randall.doneen@state.mn.us		Department of Natural Resources	500 Lafayette Rd, PO Box 25 Saint Paul MN, 55155 United States	Electronic Service		No	22-132Official CC Service List
7	Richard	Dornfeld	richard.dornfeld@ag.state.mn.us		Office of the Attorney General - Department of Commerce	Minnesota Attorney General's Office 445 Minnesota Street, Suite 1800 Saint Paul MN, 55101 United States	Electronic Service		No	22-132Official CC Service List
8	Bret	Eknes	bret.eknes@state.mn.us		Public Utilities Commission	Suite 350 121 7th Place East St. Paul MN, 55101-2147 United States	Electronic Service		No	22-132Official CC Service List
9	Kate	Fairman	kate.fairman@state.mn.us		Department of Natural Resources	Box 32 500 Lafayette Rd St. Paul MN, 55155-4032 United States	Electronic Service		No	22-132Official CC Service List
10	Annie	Felix Gerth	annie.felix-gerth@state.mn.us			Board of Water & Soil Resources 520 Lafayette Rd Saint Paul MN, 55155 United States	Electronic Service		No	22-132Official CC Service List
11	Sharon	Ferguson	sharon.ferguson@state.mn.us		Department of Commerce	85 7th Place E Ste 280 Saint Paul MN, 55101-2198 United States	Electronic Service		No	22-132Official CC Service List

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
12	Todd	Green	todd.a.green@state.mn.us		Minnesota Department of Labor & Industry	443 Lafayette Rd N St. Paul MN, 55155-4341 United States	Electronic Service		No	22-132Official CC Service List
13	Kari	Howe	kari.howe@state.mn.us		DEED	332 Minnesota St, #E200 1ST National Bank Bldg St. Paul MN, 55101 United States	Electronic Service		No	22-132Official CC Service List
14	Breann	Jurek	bjurek@fredlaw.com	Fredrikson & Byron PA		60 S Sixth St Ste 1500 Minneapolis MN, 55402 United States	Electronic Service		No	22-132Official CC Service List
15	Raymond	Kirsch	raymond.kirsch@state.mn.us		Department of Commerce	85 7th Place E Ste 500 St. Paul MN, 55101 United States	Electronic Service		No	22-132Official CC Service List
16	Chad	Konickson	chad.konickson@usace.army.mil	U.S.Army Corps of Engineers		332 Minnesota St. Suite E1500 Saint Paul MN, 55101 United States	Electronic Service		No	22-132Official CC Service List
17	Nicholas	Korn	njkorn@gmail.com			27445 County Road 23 Albany MN, 56307 United States	Electronic Service		No	22-132Official CC Service List
18	Stacy	Kotch Egstad	stacy.kotch@state.mn.us		MINNESOTA DEPARTMENT OF TRANSPORTATION	395 John Ireland Blvd. St. Paul MN, 55155 United States	Electronic Service		No	22-132Official CC Service List
19	Andrew	Levi	andrew.levi@state.mn.us		Department of Commerce	85 7TH PLACE E SUITE 280 SAINT PAUL MN, 55011-2198 United States	Electronic Service		No	22-132Official CC Service List
20	Dawn S	Marsh	dawn_marsh@fws.gov	U.S. Fish & Wildlife Service		Minnesota-Wisconsin Field Offices 4101 American Blvd E Bloomington MN, 55425 United States	Electronic Service		No	22-132Official CC Service List
21	Carol A.	Overland	overland@legalectric.org	Legalectric - Overland Law Office		1110 West Avenue Red Wing MN, 55066 United States	Electronic Service		No	22-132Official CC Service List
22	Stephen	Rakow	stephen.rakow@state.mn.us		Department of Commerce	Suite 280 85 Seventh Place East St. Paul MN, 55101-2198 United States	Electronic Service		No	22-132Official CC Service List
23	Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us		Office of the Attorney General - Residential Utilities Division	1400 BRM Tower 445 Minnesota St St. Paul MN, 55101-2131 United States	Electronic Service		Yes	22-132Official CC Service List
24	Stephan	Roos	stephan.roos@state.mn.us		Minnesota Department of Agriculture	625 Robert St N Saint Paul	Electronic Service		No	22-132Official CC

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
						MN, 55155-2538 United States				Service List
25	Christine	Schwartz	regulatory.records@xcelenergy.com	Xcel Energy		414 Nicollet Mall FL 7 Minneapolis MN, 55401-1993 United States	Electronic Service		No	22-132Official CC Service List
26	Will	Seuffert	will.seuffert@state.mn.us		Public Utilities Commission	121 7th Pl E Ste 350 Saint Paul MN, 55101 United States	Electronic Service		Yes	22-132Official CC Service List
27	Janet	Shaddix Elling	jshaddix@janetshaddix.com	Shaddix And Associates		7400 Lyndale Ave S Ste 190 Richfield MN, 55423 United States	Electronic Service		Yes	22-132Official CC Service List
28	Bria	Shea	bria.e.shea@xcelenergy.com	Xcel Energy		414 Nicollet Mall Minneapolis MN, 55401 United States	Electronic Service		No	22-132Official CC Service List
29	Suzanne	Todnem	suzanne.todnem@state.mn.us		Office of Administrative Hearings	600 Robert Street North PO Box 64620 St. Paul MN, 55164 United States	Electronic Service		Yes	22-132Official CC Service List
30	Jayme	Trusty	execdir@swrdc.org	SWRDC		2401 Broadway Ave #1 Slayton MN, 56172 United States	Electronic Service		No	22-132Official CC Service List
31	Jen	Tyler	tyler.jennifer@epa.gov	US Environmental Protection Agency		Environmental Planning & Evaluation Unit 77 W Jackson Blvd. Mailstop B-19J Chicago IL, 60604-3590 United States	Electronic Service		No	22-132Official CC Service List
32	Garrick	Valverde	garrick.valverde@apexcleanenergy.com	Apex Clean Energy		8665 Hudson Boulevard North Suite 200 Lake Elmo MN, 55042 United States	Electronic Service		No	22-132Official CC Service List
33	Haley	Waller Pitts	hwallerpitts@fredlaw.com	Fredrikson & Byron, P.A.		60 S Sixth St Ste 1500 Minneapolis MN, 55402-4400 United States	Electronic Service		No	22-132Official CC Service List
34	Cynthia	Warzecha	cynthia.warzecha@state.mn.us	Minnesota Department of Natural Resources		500 Lafayette Road Box 25 St. Paul MN, 55155-4040 United States	Electronic Service		No	22-132Official CC Service List
35	Alan	Whipple	sa.property@state.mn.us		Minnesota Department Of Revenue	Property Tax Division 600 N. Robert Street St. Paul MN, 55146-3340 United States	Electronic Service		No	22-132Official CC Service List
36	Jonathan	Wolfgram	jonathan.wolfgram@state.mn.us		Office of Pipeline Safety	445 Minnesota St Ste 147 Woodbury	Electronic Service		No	22-132Official CC

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
						MN, 55125 United States				Service List