OAH Docket No. 7-2500-20283-2
MPUC Docket No. ET-2/TL-08-1474

STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS
FOR THE PUBLIC UTILITIES COMMISSION

In the Matter of the Route Permit Application by Great River Energy and Xcel Energy for a 345 kV Transmission Line from Brookings County, South Dakota to Hampton, Minnesota.	**AMENDMENTS TO FINDINGS OF FACT, CONCLUSIONS, AND RECOMMENDATION**

Administrative Law Judge Richard C. Luis issued Findings of Fact, Conclusions, and Recommendation in this proceeding on April 22, 2010. Subseqently, several clerical errors were identified in the report issued on that date. Pursuant to Minn. Rule 1400.8300, the Administrative Law Judge hereby corrects the Report in the identifed locations to read:

[**RECOMMENDATIONS**, page 3, number 2. B. (1)]

(1) The Revised Cedar Mountain 115 kV Route as shown on Attachment 7 (appended to the Applicants' Proposed Findings of Fact, Conclusions of Law, and Recommendation, Doc. Id. 20102-47095-01);

[**FINDINGS OF FACT**, page 74, Finding 435, Footnote 551]

Footnote 551 Attachment 4A is Ex. 202 (Route Alternatives Map); Attachment 4B is Ex. 202, annotated to identify the locations contained in public comment received after the hearing opposing Applicants' Preferred Route in the Hampton area (Attachments 4A and 4B are appended to the Johnsons' Proposed Findings of Fact, Conclusions of Law, and Recommendations, Doc. Id. 20103-47786-02, PDF pages 26 and 27).

[**CONCLUSIONS**, page 100, Conclusion 13]

The record demonstrates that it is appropriate to grant a Route Permit for the Revised Cedar Mountain South 115 kV Route, as shown on Attachment 7 (appended to the Applicants' Proposed Findings of Fact, Conclusions of Law, and Recommendation, Doc. Id. 20102-47095-01).

Dated: April 30, 2010

RICHARD C. LUIS
Administrative Law Judge

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April 30, 2010

To: All Participants on the Service List

Re: ***In the Matter of the Application of the Route Permit Application by Great River Energy and Xcel Energy for a 345 KV Transmission Line from Brookings County, South Dakota to Hapton, Minnesota*;**
MPUC Docket No. ET-2/TL-08-1474
OAH Docket No. 7-2500-20283-2

Dear Parties:

The document listed below has been filed with the E-Docket system and served as specified on the attached service list.

Amendments to Findings of Fact, Conclusions, and Recommendation

Very truly yours,

Richard C. Luis mo.

RICHARD C. LUIS
Administrative Law Judge

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STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS
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CERTIFICATE OF SERVICE

Case Title: ***In the Matter of the Application of the Route Permit Application by Great River Energy and Xcel Energy for a 345 KV Transmission Line from Brookings County, South Dakota to Hapton, Minnesota***	**OAH Docket No. 7-2500-20283-2** **MPUC Docket No. ET-2/TL-08-1474**

Mary Osborn certifies that on the 30th day of April, 2010, she served a true and correct copy of the Amendments to Findings of Fact, Conclusions, and Recommendation; by electronic mail (or as indicated on the Service List) to the following individuals:

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April 22, 2010

See Attached Service List

Re: ***In the Matter of the Route Permit Application by Great River Energy and Xcel Energy for a 345 kV Transmission Line from Brookings County, South Dakota to Hampton, Minnesota***
OAH 7-2500-20283-2
PUC ET-2/TL-08-1474

Dear Parties:

The document listed below has been filed with the E-Docket system and served as specified on the attached service list.

Findings of Fact, Conclusions and Recommendation.

Very truly yours,

s/Richard D. Luis

RICHARD C. LUIS
Administrative Law Judge

Telephone: (651) 361-7843

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Enclosures

STATE OF MINNESOTA
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CERTIFICATE OF SERVICE

In the Matter of the Route Permit Application by Great River Energy and Xcel Energy for a 345 kV Transmission Line from Brookings County, South Dakota to Hampton, Minnesota	OAH 7-2500-20283-2 PUC ET-2/TL-08-1474

Denise Collins, certifies that on the 22nd day of April, 2010, she served a true and correct copy of the attached **Findings of Fact, Conclusions and Recommendation** by eService, (in the manner indicated below) to the following individuals:

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Done Internet 125%

STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS

FOR THE PUBLIC UTILITIES COMMISSION

In the Matter of the Route Permit Application by Great River Energy and Xcel Energy for a 345 kV Transmission Line from Brookings County, South Dakota to Hampton, Minnesota

OAH Docket No. 7-2500-20283-2
MPUC Docket No. ET-2/TL-08-1474

FINDINGS OF FACT, CONCLUSIONS AND RECOMMENDATION

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OAH Docket No. 7-2500-20283-2
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STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS
FOR THE PUBLIC UTILITIES COMMISSION

In the Matter of the Route Permit Application by Great River Energy and Xcel Energy for a 345 kV Transmission Line from Brookings County, South Dakota to Hampton, Minnesota.

FINDINGS OF FACT, CONCLUSIONS, AND RECOMMENDATION

A Public Hearing was held before Richard C. Luis, Administrative Law Judge ("ALJ"), commencing on November 30, 2009, in Granite Falls, Minnesota and continuing at dates and places more specifically set forth below. The Evidentiary portion of the Hearing was held from December 15, 2009 to December 18, 2009 in St. Paul, Minnesota.

Lisa M. Agrimonti and Valerie Herring, Briggs and Morgan, appeared for Great River Energy, a Minnesota cooperative corporation, and on behalf of itself and its co-applicant, Northern States Power Company, a Minnesota corporation ("Xcel Energy").

Karen Finstad Hammel, Assistant Attorney General, appeared on behalf of the Department of Commerce, Office of Energy Security ("OES").

Paula Maccabee, Attorney at Law, appeared on behalf of Robert and Patricia Johnson ("Intervenor Johnsons").

Carol Overland, Overland Law Office, appeared on behalf of NoCapX2020 and United Citizens Action Network ("U-CAN").

Bob Cupit and Michael Kaluzniak, Planning Directors, Minnesota Public Utilities Commission ("Commission," "PUC," or "MPUC"), 121 Seventh Place East, Suite 350, St. Paul, MN 55101 appeared on behalf of the Commission.

STATEMENT OF ISSUE

Have Applicants satisfied the criteria set forth in Minnesota Statutes § 216E.03[1] and Minnesota Rules Chapter 7850 for a Route Permit for the Brookings to Hampton 345 kV transmission line project, including necessary system connections, and, if so, what route complies best with applicable statutes and rules?

[1] Unless otherwise noted, the statutes and rules are cited to the 2009 edition.

Based on the Findings of Fact and Conclusions that follow, the Administrative Law Judge makes the following:

RECOMMENDATIONS

1. That the Commission determine that all relevant statutory and rule criteria necessary to obtain a Route Permit have been satisfied and that there are no statutory or other requirements that preclude granting a Route Permit based on the record.

2. That the Commission grant a Route Permit to Applicants on behalf of themselves and the participating CapX2020 utilities for the facilities described below, to the effect of authorizing:

A. For the 345 kV transmission line between Brookings to Hampton and Associated Facilities,

(1) The Modified Preferred Route, with an aerial crossing of the Minnesota River at Le Sueur, modified further by Alternative 6P-06 between Lake Marion and Hampton;

(1a) If the Modified Preferred Route adjusted by Alternative 6P-06 is not granted a Permit, the ALJ recommends granting of a Route Permit for the Modified Preferred Route, modified further by Alternative 6P-06, and modified further by the Crossover/Alternate Route between Sibley County and the Helena Substation, with an aerial crossing of the Minnesota River at Belle Plaine;

(2) A route width of 600 feet except for those locations identified in Applicants' Proposed Findings where Applicants are requesting a route width of 1,000 feet or up to 1.25 miles[2];

(3) Construction of four new substations (Hazel Creek Substation, Cedar Mountain Substation, Helena Substation, and Hampton Substation) at the substation sites identified in the Application;

(4) Modifications and additions to four existing substations (Brookings County Substation, Lyon County Substation, Minnesota Valley Substation, and Lake Marion Substation) to accommodate the new transmission line facilities;

(5) A short transmission line connector between the existing Wilmarth – Blue Lake 345 kV line and the new Helena Substation; and

[2] Attachment 2 to Applicants' Proposed Findings of Fact, Conclusions and Recommendation shows the portions of the Modified Preferred Route where Applicants are requesting a route width of up to 1.25 miles.

(6) A short transmission line connector between the existing Prairie Island – Blue Lake 345 kV line and the new Hampton Substation.

B. For the 115 kV transmission line between Cedar Mountain Substation and Franklin Substation,

(1) The Revised Cedar Mountain 115 kV Route as shown on Attachment 7;

(2) A route width of 4,225 feet; and

(3) Expansion of and modifications to the Franklin Substation to accommodate the new 115 kV transmission line facilities.

3. That Applicants be required to take those actions necessary to implement the Commission's Orders in this proceeding.

Based on the Hearing record, the ALJ makes the following Findings of Fact and Conclusions:

FINDINGS OF FACT

A. Applicants

1. Great River Energy is a Minnesota cooperative corporation that owns and operates high voltage transmission lines in Minnesota and provides wholesale electric service to 28 distribution cooperatives serving nearly 1.5 million customers in Minnesota and Wisconsin.[3] Headquartered in Maple Grove, Minnesota, Great River Energy is the second largest utility in Minnesota and the fifth largest utility of its type in the country.[4] Great River Energy is not a public utility.[5]

2. Xcel Energy is a Minnesota corporation headquartered in Minneapolis, Minnesota. Xcel Energy is a wholly owned subsidiary of Xcel Energy Inc., a utility holding company with its headquarters in Minneapolis. Xcel Energy provides electricity services to approximately 1.2 million customers and natural gas services to 425,000 residential, commercial and industrial customers in the State.[6]

3. Applicants jointly applied for a Route Permit to construct a 345 kV transmission line project from the South Dakota/Minnesota border to Hampton, Minnesota. Applicants maintained that the proposed project will improve regional

[3] Ex. 2 at p. 1-1 (Application).

[4] *Id*.

[5] *Id*.

[6] *Id*.

transmission system reliability, enhance local community service, and increase the generation outlet capability of the electrical system.[7]

B. Procedural Summary[8]

4. On December 29, 2008, Applicants submitted an Application for Route Permit ("Application") for the Minnesota portion of a 345 kV transmission line between Brookings County, South Dakota and Hampton, Minnesota and associated facilities, and for a new 115 kV transmission line between Cedar Mountain Substation and the Minnesota Valley – Franklin 115 kV transmission line (collectively "the Brookings Project" or the "Project").[9]

5. On December 31, 2008, Applicants submitted a supplement to the Application.[10]

6. On January 21, 2009, OES Energy Facility Permitting staff filed comments and recommendations regarding the completeness of the Application and the formation of advisory tasks forces.[11]

7. On January 27, 2009, NoCapX2020 & U-CAN filed a Petition to Intervene in the proceeding as full parties under Minnesota Rule 1400.6200 and further requested that the Commission appoint a Citizens Advisory Task Force ("CATF") under Minnesota Rule 7850.2400, subp. 2.[12]

8. On January 28, 2009, Applicants filed Confirmation of Notice including Affidavits of Mailing and Publication as required under Minnesota Statute § 216E.03, subd. 4; Minnesota Rule 7850.2100, subp. 2; and Minnesota Rule 7850.2100, subp. 4.[13]

9. On January 29, 2009, the Commission accepted the Application as complete and authorized the OES Energy Facility Permitting staff to process the Application under the full permitting process in Minnesota Rules 7850.1700 to

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[7] Ex. 2 (Application).

[8] Additional motions concerning discovery, intervention and other matters were filed and additional orders were issued. All of these documents are included in the record.

[9] Ex. 2 (Application).

[10] Ex. 3 (Application Supplement).

[11] Ex. 6 (OES January 21, 2009 Comments).

[12] *In the Matter of the Route Permit Application for a 345 kV Transmission Line from Brookings County, South Dakota to Hampton, Minnesota*, Docket No.: ET-2/TL-08-1474, NoCapX and UCAN Petition for Intervention (Jan. 27, 2009).

[13] Ex. 8 (Applicant Mailed and Published Notices of Application Filing)

7850.2800.[14] The Commission also authorized the OES Energy Facility Permitting staff to name a public advisor and to establish an advisory task force or task forces and develop a structure and charge for them.[15]

10. On February 5, 2009, the Commission assigned this matter to ALJ Richard C. Luis of the Office of Administrative Hearings ("OAH").[16]

11. On February 12, 2009, the Intervenor Johnsons filed a petition to intervene as full parties under Minnesota Rule 1400.6200.[17]

12. On March 9, 2009, OES issued a Notice of Public Information and Environmental Impact Statement ("EIS") Scoping Meetings.[18]

13. On March 11, 2009, OES issued a Revised Notice of Public Information Meetings.[19]

14. On March 11, 2009, OES appointed 16 persons to the Minnesota River Crossings to New Prague Advisory Task Force ("ATF").[20]

15. On March 11, 2009, OES appointed 18 persons to the Lake Marion to Hampton ATF.[21]

16. OES held Public Information Meetings in the Project area from March 30, 2009 to April 2, 2009, and from April 6 to April 9, 2009.[22]

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[14] *In the Matter of the Route Permit Application for a 345 kV Transmission Line from Brookings County, South Dakota to Hampton, Minnesota*, Docket No.: ET-2/TL-08-1474, (Commission Order issued Jan. 29, 2009).

[15] *Id.*

[16] *In the Matter of the Route Permit Application for a 345 kV Transmission Line from Brookings County, South Dakota to Hampton, Minnesota*, Docket No.: ET-2/TL-08-1474, (Commission Order issued Feb. 5, 2009).

[17] *In the Matter of the Route Permit Application for a 345 kV Transmission Line from Brookings County, South Dakota to Hampton, Minnesota*, Docket No.: ET-2/TL-08-1474, Petition to Intervene on Behalf Patricia and Robert Johnson (Feb. 12, 2009).

[18] Ex. 11 (OES Notice of EIS Scoping Meetings).

[19] Ex. 12 (OES Revised Notice of EIS Scoping Meetings).

[20] Ex. 16 at p. 2 (EIS Scoping Decision).

[21] *Id*.

[22] Ex. 16 at p. 3 (EIS Scoping Decision).

17. On April 22, 2009, the Commission issued a Notice of Prehearing Conference setting on that conference for May 7, 2009.[23]

18. Public comments regarding the scope of the EIS were accepted by OES until April 30, 2009.[24]

19. On April 30, 2009, Applicants filed comments requesting that OES add two additional route segment alternatives to the scope of the EIS along the South Dakota/Minnesota border and two additional route segment alternatives in the Belle Plaine area.[25]

20. On May 1, 2009, Applicants sent notice to landowners along the two additional route segment alternatives along the South Dakota/Minnesota border and to landowners along the two additional route segment alternatives in the Belle Plaine area.[26]

21. On June 5, 2009, the ALJ issued the First Prehearing Order setting the schedule for further proceedings and procedures to be followed throughout this contested case proceeding. The Order granted the Petitions for Intervention of NoCapX2020, U-CAN and the Johnsons; established October 7, 2009, as the deadline for a party to intervene; established October 13, 2009, as the deadline for filing Direct Testimony; established November 9, 2009, as the deadline for filing Rebuttal Testimony; established November 18, 2009, as the deadline for filing Surrebuttal Testimony; determined that the Public Hearings would be held over the period from November 23 to December 14, 2009, in the Project area; determined that the Evidentiary Hearing would be held on December 17 and 18, 2009, in Saint Paul; and established January 22, 2010, as the deadline for Initial Post-Hearing Briefs.[27]

22. On June 12, 2009, OES filed the Minnesota River Crossings to New Prague and Lake Marion to Hampton ATF reports.[28]

23. On June 30, 2009, OES issued the EIS Scoping Decision that set forth the alternatives and issues to be addressed in the EIS.[29]

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[23] *In the Matter of the Route Permit Application for a 345 kV Transmission Line from Brookings County, South Dakota to Hampton, Minnesota*, Docket No.: ET-2/TL-08-1474, (Notice of Prehearing Conference issued April 22, 2009).

[24] Ex. 16 at pp. 3-4 (EIS Scoping Decision).

[25] Ex. 137 (Applicants' Notice to Landowners and Applicants' April 30, 2009 EIS Scoping Comments).

[26] *Id*.

[27] Ex. 14 (ALJ First Prehearing Order).

[28] Ex. 16 at p. 2 (EIS Scoping Decision).

[29] Ex. 16 (EIS Scoping Decision).

24. On September 11, 2009, the ALJ issued the Second Prehearing Order amending the schedule set in the First Prehearing Order. The Second Prehearing Order established October 13, 2009, as the filing date for Applicants' Direct Testimony; October 26, 2009, as the deadline for a party to intervene; November 9, 2009, as the deadline for all other Direct Testimony; and November 20, 2009, as the deadline for filing Rebuttal Testimony. The Second Prehearing Order also provided that the Public Hearings would be held from November 30 to December 11, 2009, in the Project area; that the Evidentiary Hearing would be held from December 15 to 18, 2009, in Saint Paul; set a tentative deadline of January 15, 2010, for Public Comments; and established January 22, 2010, as the tentative deadline for initial Post-Hearing Briefs.[30]

25. On September 15, 2009, OES issued notice to landowners with property affected by the new route and segment alternatives presented for consideration in the EIS Scoping Decision.[31]

26. On October 13, 2009, Applicants filed Direct Testimony by Craig Poorker, Kevin Lennon, Dr. Peter Valberg, and Pamela Rasmussen. [32]

27. On October 16, 2009, Applicants sent notice to landowners of a new route segment for the 115 kV transmission line proposed to run from County Road 71 to the existing Franklin Substation.[33]

28. On October 21, 2009, OES issued the Draft EIS ("DEIS").[34]

29. On November 6, 2009, OES issued notice to landowners with property affected by north and south route connectors that were presented for the first time in the DEIS.[35]

30. On November 6, 2009, OES issued its Notice of Public Hearing.[36]

31. On November 9, 2009, Intervenor Johnsons filed Direct Testimony by Dr. David Carpenter and Peter MacDonagh.[37]

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[30] Ex. 20 (ALJ Second Prehearing Order).

[31] Ex. 21 (OES Sept. 15, 2009 Notice to Landowners).

[32] Ex. 102 (Poorker Direct); Ex. 104 (Lennon Direct); Ex. 106 (Rasmussen Direct); Ex. 108 (Valberg Direct).

[33] Ex. 27 (Applicants' Oct. 16, 2009 Notice to Landowners).

[34] Ex. 23 (DEIS).

[35] Ex. 34 (OES November 6, 2009 Landowner Notice).

[36] Ex. 32 (OES November 9, 2009 Notice of Public Hearing).

[37] Ex. 200 (MacDonagh Direct); Ex. 201 (Carpenter Direct).

32. OES held Public Information meetings from November 12 to 16, 2009, and November 17 to 29, 2009 throughout the Project area.[38]

33. On November 20, 2009, Applicants filed Rebuttal Testimony by Craig Poorker, Kevin Lennon, Dr. Peter Valberg, and Pamela Rasmussen.[39]

34. From November 30 to December 28, 2009, 17 public hearings were held in 8 different Minnesota communities along the Modified Preferred Route and the Alternate Route. Public hearings were held in: Granite Falls, Marshall, Redwood Falls, Winthrop, Henderson, Lonsdale, New Prague, and Lakeville.[40]

35. On December 15, 2009, Applicants filed Supplemental Testimony by Craig Poorker and Kevin Lennon.[41]

36. From December 15 to December 18, 2009, the Evidentiary Hearing was held in the Commission's large hearing room in St. Paul.[42]

37. On January 26, 2010, OES issued the Final EIS ("FEIS").

38. On February 8, 2010, the FEIS was published in the EQB Monitor.[43]

39. Public comments on the proposed Project were accepted by the ALJ until February 8, 2010.

40. The Hearing record closed for all purposes on March 22, 2010.[44]

C. <u>Description of the Brookings Project</u>

41. This Project consists of 345 kV and 115 kV transmission line facilities.[45]

42. The 345 kV transmission line facilities and substation connections are between: 1) the existing Brookings County Substation near White, South Dakota and a new Hampton Substation near Hampton, Minnesota; and 2) the Lyon County Substation

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[38] Ex. 23 at p. 3-3 (DEIS).

[39] Ex. 103 (Poorker Rebuttal); Ex. 105 (Lennon Rebuttal); Ex. 107 (Rasmussen Rebuttal); Ex. 109 (Valberg Rebuttal).

[40] Ex. 30 (OES November 6, 2009 Notice of Public Hearings); Ex. 160 (Applicants' Notice of Rescheduled New Prague Public Hearing).

[41] Ex. 140 (Poorker Supplemental); Ex. 141 (Lennon Supplemental).

[42] Ex. 30 (OES November 6, 2009 Notice of Public Hearings).

[43] EQB Monitor Vol. 34 No. 3 (February 8, 2010) at p. 5.

[44] Email from ALJ to Parties and participants, dated March 22, 2010, Doc. Id. 20104-48694-01.

[45] Ex. 2 at §§ 2.2 and 2.4 (Application).

near Marshall, Minnesota and the Minnesota Valley Substation near Granite Falls, Minnesota.[46]

43. The Lyon County Substation – Cedar Mountain Substation – Helena Substation sections of the 345 kV transmission line, representing about half the length of the Project, will be constructed with double-circuit 345 kV facilities.[47] Applicants proposed to construct the remaining portion of the Project with double-circuit capable poles, with one circuit strung at the time of installation.[48] The 345 kV sections proposed as double-circuit capable include the Brookings County Substation – Lyon County Substation section, the Helena Substation – Lake Marion – Hampton Substation section, and the Lyon County Substation – Hazel Creek Substation – Minnesota Valley Substation section.[49]

44. The Project also includes interconnections between the Helena Substation and the existing Wilmarth – Blue Lake 345 kV transmission line, and the Hampton Substation and the existing Prairie Island – Blue Lake 345 kV transmission line.[50]

45. The Project also includes the construction of associated facilities including four new substations (Hazel Creek Substation, Helena Substation, Cedar Mountain Substation, Hampton Substation), expansion of four existing substations (Brookings County Substation, Lyon County Substation, Minnesota Valley Substation, and Lake Marion Substation), and related transmission line interconnections.[51]

46. The 115 kV transmission line runs between the new Cedar Mountain Substation and the Franklin Substation. Accommodating the line will require expansion of the Franklin Substation.[52]

47. The Commission issued a Certificate of Need for the 345 kV facilities in May 2009.[53]

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[46] Ex. 102 at p. 7 (Poorker Direct).

[47] *Id*. at p. 8.

[48] *Id*.

[49] *Id*.

[50] Ex. 102 at pp. 7-8 (Poorker Direct).

[51] Ex. 102 at p. 7 (Poorker Direct).

[52] Ex. 2 at § 2.4.4 (Application).

[53] *In the Matter of the Application of Great River Energy, Northern States Power Company (d/b/a Xcel Energy) and others for Certificates of Need for the CapX 345-kV Transmission Project*, Docket No. ET-2, E-002, et al./CN-06-1115 (PUC Order Granting Certificates of Need with Conditions, issued May 22, 2009 as modified August 9, 2009) ("Certificate of Need Order").

D. Routes Proposed in the Application

48. In the Application, Applicants identified a Preferred Route and an Alternative Route for the 345 kV transmission line.[54]

49. Applicants selected these two routes at the end of a 15-month route development process that was driven by extensive public participation and agency coordination.[55] During this process, Applicants gathered environmental data, held open houses and work group meetings, collected public comments, and analyzed the statutory and rule factors set forth in the Power Plant Siting Act ("PPSA"), Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850 to develop the Preferred Route and the Alternate Route for the Project.[56]

50. The Preferred Route is 237 miles long and includes six 345 kV transmission line sections between the South Dakota border and a proposed Hampton Substation near Hampton, Minnesota.[57] From west to east, the Preferred Route begins near Hendricks, Minnesota, passes north of Marshall, and then takes a southerly route via Franklin and Le Sueur. After crossing the Minnesota River at Le Sueur, the Preferred Route then heads north of New Prague and Elko New Market to terminate at the proposed substation near Hampton.[58] The Lyon County – Hazel Creek – Minnesota Valley sections of the Preferred Route head north at the existing Lyon County substation and follow an existing 115 kV corridor north to connect into a new Hazel Creek Substation.[59] The route then crosses the Minnesota River near Granite Falls to connect into the existing Minnesota Valley Substation.[60]

51. The Alternate Route is 262 miles long and includes six 345 kV transmission line sections between the South Dakota border and a proposed Hampton Substation near Hampton.[61] From west to east, the Alternate Route begins near Hendricks, Minnesota, passes south of Marshall, and then takes a northerly route via Redwood Falls, Franklin, and Belle Plaine.[62] After crossing the Minnesota River at Belle Plaine, the Alternate Route then heads south of New Prague and Elko New Market to terminate at the proposed substation near Hampton.[63] The Lyon County – Hazel Creek

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[54] Ex. 2 at § 5 (Application); Ex. 102 at p. 11 (Poorker Direct).

[55] Ex. 2 at § 4.0 (Application); Ex. 102 at p. 11 (Poorker Direct).

[56] *Id*.

[57] Ex. 2 at § 5.1 (Application); Ex. 102 at p. 12 (Poorker Direct).

[58] *Id*.

[59] Ex. 2 at § 5.1 (Application); Ex. 102 at p. 13 (Poorker Direct).

[60] *Id*.

[61] Ex. 2 at § 5.2 (Application); Ex. 102 at p. 13 (Poorker Direct).

[62] *Id*.

[63] *Id*.

– Minnesota Valley sections of the Alternate Route head north from the Lyon County Substation along an existing 69 kV line for approximately seven miles and then follow field lines and roads to connect to a new Hazel Creek Substation. After leaving the Hazel Creek Substation, the line crosses the Minnesota River at Granite Falls to connect into the existing Minnesota Valley Substation.[64]

52. As part of the Application, Applicants presented three routing options for the new 115 kV transmission line between the new Cedar Mountain Substation and the Franklin Substation area.[65]

53. The first alternative taps the existing Franklin to New Ulm 115 kV transmission line approximately one mile east of the existing Franklin Substation and runs approximately 0.75 miles to the proposed Cedar Mountain Substation South area.[66]

54. The second alternative will tap the Franklin to New Ulm 115 kV transmission line and extends approximately 0.25 miles to 0.5 miles to the proposed Cedar Mountain Substation South area.[67]

55. The third alternative taps the Minnesota Valley to Franklin 115 kV transmission line and would run approximately two miles to the proposed Cedar Mountain Substation North area, with an option to route the new 115 kV line into the existing Franklin Substation.[68]

E. Modified Preferred Route

56. Following a thorough review and analysis of the various route and segment alternatives proposed in the EIS Scoping Decision, Applicants reevaluated the Preferred Route.[69] From this analysis, Applicants identified several modifications to the Preferred Route.[70] These four route modifications were incorporated into the Preferred Route to develop the Modified Preferred Route.[71]

57. The first route modification, identified as 3P-06 in the DEIS, is located in Underwood Township in Redwood County.[72] The Modified Preferred Route leaves the

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[64] Ex. 2 at § 5.2 (Application); Ex. 102 at pp. 13-4 (Poorker Direct).

[65] Ex. 2 at p. 2-4, § 7.3 (Application).

[66] Ex. 2 at p. 2-5 (Application).

[67] *Id.*

[68] *Id.*

[69] Ex. 102 at p. 15 (Poorker Direct).

[70] *Id*.

[71] *Id*.

[72] Ex. 102 at pp. 15-17 (Poorker Direct).

Preferred Route and heads south between sections 35 and 36 until it comes to the north side of State Highway 19.[73] The Modified Preferred Route continues east for one mile until it joins the Preferred Route at the junction of County Highway 5 and County Highway 12.[74]

58. The second route modification, identified as 3P-04 in the DEIS, is located in Eden Township in Brown County and is approximately 0.5 mile north of 320th Street, where the Modified Preferred Route heads east along the half section line of Section 7 for one mile.[75] The Modified Preferred Route turns north on 330th Avenue for approximately one mile and turns east on the half section line of Section 5.[76] The Modified Preferred Route then turns north on 327th Avenue for 0.5 mile where it rejoins the Preferred Route.[77]

59. The third route modification, identified as P-SCT-002 in the DEIS (renumbered as 5P-02 on maps used at the Hearings[78]), is located between the Helena Substation and the Lake Marion Substation at the intersection of Aberdeen Avenue and 270th Street.[79] The Modified Preferred Route continues east for one mile to Delmar Avenue.[80] At Delmar Avenue, the Modified Preferred Route continues north one mile until it joins the Preferred Route at 260th Street.[81]

60. The fourth modification is along the South Dakota border south of Hendricks, Minnesota, along 290th Street in Hendricks Township. The Modified Preferred Route includes an approximately 2.15-mile route segment along 290th Street just south of Highway 19, where it crosses into South Dakota. The route segment includes 290th Street where it turns south for approximately 600 feet on the Minnesota border (this road becomes 201st Street in South Dakota). The route width in this area is proposed to be 1.1 miles.[82]

61. Applicants also developed three alignment and route width modifications, which were incorporated into the Modified Preferred Route.[83]

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[73] *Id*.

[74] *Id*.

[75] *Id*.

[76] *Id*.

[77] *Id*.

[78] Exs. 119 and 134.

[79] Ex. 102 at pp. 15-17 (Poorker Direct).

[80] *Id*.

[81] *Id*.

[82] Ex. 102 at pp. 15-17 (Poorker Direct).

[83] Ex. 103 at pp. 16-20 (Poorker Rebuttal); Ex. 140 at 11 (Poorker Supplemental).

62. The alignment of the Preferred Route centerline at the Le Sueur Minnesota River crossing was changed to parallel U.S. Highway 169. Applicants made this modification to avoid crossing Buck's Lake, which the Minnesota Department of Natural Resources ("MnDNR") identified as a habitat to "substantial numbers of bald eagles, great egrets, and other waterfowl."[84] The MnDNR did not support a crossing of Buck's Lake "due to the high concentration of species using the area for resting, roosting, feeding and nesting."[85]

63. The Preferred Route width and proposed alignment were changed to avoid the RES Specialty Pyrotechnics, Inc. ("RES"), facilities near Belle Plaine. The Institute of Makers of Explosives has detailed guidance regarding proximity of transmission line facilities to pyrotechnic facilities. This guidance recommends that transmission lines be located no nearer to the pyrotechnic facility than the width between poles in the line (in this case, 1,000 feet)..[86]

64. The Preferred Route width was expanded to 3,000 feet for a certain narrow area north of Marshall, Minnesota.[87]

F. <u>Crossover Route</u>

65. As a result of certain preferences and concerns, described in greater detail below, expressed by the United States Fish and Wildlife Service and MnDNR, Applicants developed a north/south route connector west of Arlington, Minnesota. Applicants referred to this segment alternative as the "USFWS/MnDNR Alternative."[88]

66. Applicants evaluated the USFWS/MnDNR Alternative and provided information about the alternative in pre-filed Direct Testimony.[89]

67. Applicants used the USFWS/MnDNR crossover segment to develop a hybrid of the Modified Preferred Route and Alternative Route (the "Crossover Route").[90]

68. The Crossover Route would be approximately 247 miles long. This route alternative follows the Modified Preferred Route from the Brookings Substation to the Cedar Mountain Substation. From the Cedar Mountain Substation, the route continues east along the Modified Preferred Route, then runs north along CSAH 13 in Sibley County to State Highway 5. It then follows State Highway 5 for about 2.25 miles before

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[84] Ex. 140 at Schedule 49 at p. 2 (Poorker Supplemental).

[85] *Id*.

[86] Ex. 103 at pp. 16-19 (Poorker Rebuttal); Ex. 105 at pp. 1-3 (Lennon Rebuttal).

[87] Ex. 137 (Applicants' Notice to Landowners and Applicants' April 30, 2009 EIS Scoping Comments).

[88] Ex. 140 at Schedule 44 at pp. 1-2 (Poorker Supplemental).

[89] Ex. 102 at pp. 54-9 (Poorker Direct).

[90] Ex. 140 at p. 7 (Poorker Supplemental).

turning north, running along a field line and a short portion of 421st Avenue, before finally connecting with the Alternate Route at the intersection of 417th Avenue and 220th Street. From its beginning off CSAH 13, the "connector" between the Preferred Route and Alternate Routes is approximately ten miles long. At this point, the line heads east, following the Alternative Route to cross the Minnesota River at Belle Plaine. The line would then follow the Applicants' Alternative Route to the Helena Substation North Area. From there, the Crossover Route will follow Applicants' Modified Preferred Route to the new Hampton Substation Area.[91]

G. Revised Cedar Mountain South 115 kV Route

69. Subsequent engineering analysis led Applicants to conclude that the 115 kV line connection from Cedar Mountain should connect directly to the Franklin Substation.[92]

70. As a result, Applicants abandoned one of the initial route alternatives from the Cedar Mountain Substation South area that did not interconnect with the Franklin Substation; and modified the remaining Cedar Mountain Substation South alternative to interconnect with the Franklin Substation ("Revised Cedar Mountain South 115 kV Route").

71. Applicants also utilized the option to interconnect the Cedar Mountain Substation North alternative to the Franklin Substation.[93]

72. This left two route alternatives for the new 115 kV line on the record.

H. Structure Types and Spans

73. Applicants propose to use single pole, galvanized or self-weathering steel double circuit structures for the majority of the 345 kV line portions of the Project.[94] For the 345 kV line sections where only one circuit (three phases) is proposed to be initially installed, Applicants propose to place the second set of davit arms that will be used to support the second 345 kV circuit on these structures during the initial installation.[95]

74. Specialty structures, including H-frame poles, may be required in certain limited circumstances.[96] For example, H-frame structures are sometimes required near environmentally sensitive areas.[97] H-frame structures consist of two wooden or steel

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[91] Ex. 140 at p. 7 (Poorker Supplemental).

[92] Ex. 102 at p. 6 (Poorker Direct).

[93] *Id.*

[94] Ex. 104 at p. 5 (Lennon Direct).

[95] Applicants February 8, 2010 Letter at pp. 4-5, filed 02/08/10, Doc. Id. 20102-46898-05.

[96] Ex. 104 at p. 5 (Lennon Direct).

[97] *Id.*

poles with cross bracing.[98] Concrete pier foundations may be used for angle structures or if soil conditions are poor.[99] At the Belle Plaine and North Redwood Minnesota River crossings on the Alternate Route, steel H-frame triple circuit structures with a distribution underbuild may also be used as dictated by final route and design.[100]

75. For the 115 kV transmission lines facilities that will connect the new Cedar Mountain Substation with the Franklin Substation, Applicants propose to use single pole wood or steel 115 kV horizontal post poles.[101]

76. Spans of 750 to 1,100 feet between structures are expected for the majority of the 345 kV facilities.[102] For the Project's 115 kV facilities, Applicants expect spans of 300 to 400 feet between structures.[103]

I. Conductors

77. Each phase of the 345 kV line is proposed to consist of bundled conductors composed of two 954 kcmil 54/7 Cardinal Aluminum Conductor Steel Supported ("ACSS") cables or conductors of comparable capacity.[104] The same conductor and bundled configuration is being proposed for all the 345 kV single circuit and double circuit transmission line sections.[105] For the 115 kV line, 795 Drake ACSS conductor is proposed.[106] Two shield wires will be strung above the conductors to prevent damage from lightning strikes. These shield wires are typically less than one inch in diameter and will include fiber optic cables, which allow a path for substation protection equipment to communicate with equipment at other terminals on the transmission line.[107]

J. Route Widths

78. Applicants initially requested a route width of 1,000 feet for the 345 kV transmission line, and where necessary, flexibility to increase the width up to 1.25 miles, centered on the proposed alignment for the proposed route's centerline.[108]

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[98] *Id*.

[99] *Id*.

[100] Ex. 104 at pp. 5-6 (Lennon Direct).

[101] Ex. 104 at p. 6 (Lennon Direct).

[102] Ex. 104 at p. 7 (Lennon Direct).

[103] *Id*.

[104] Ex. 104 at p. 6 (Lennon Direct).

[105] *Id*.

[106] Ex. 104 at p. 6 (Lennon Direct).

[107] Applicants February 8, 2010 Letter at p. 5, filed 02/08/10, Doc. Id. 20102-46898-05.

[108] Ex. 2 at § 2.3 (Application); Ex. 140 at Schedule 48 (Poorker Supplemental).

79. Applicants subsequently modified their requested route width for the Modified Preferred Route to a route width of 600 feet in those areas depicted on the 17 tile maps attached to Applicants' February 8, 2010 Letter to the ALJ.[109]

80. Should the Commission designate another route for the 345 kV transmission line, Applicants propose to work with OES to narrow the route in a timely manner after the Commission approves a route.[110]

81. Applicants request a route width of 4,225 feet for the 115 kV transmission line between Cedar Mountain Substation and Franklin Substation.[111]

K. Right-of-Way

82. A 150-foot wide right-of-way will be required for the majority of 345 kV line. In some limited instances, where specialty structures are required for long spans or in environmentally sensitive areas, a larger right-of-way width may be required.[112] The 115 kV line will require 80 feet of right-of-way.[113]

L. Project Schedule

83. Applicants expect to begin construction of the Project in the fourth quarter of 2010 and estimate that the Project will be completed by the third quarter of 2013.[114]

M. Project Costs

84. The total cost of the Project, which includes the survey, engineering, materials, construction, right-of-way, and project management associated with the transmission line and substations, is dependent, in significant part, on the length of the transmission lines facilities.[115] The total cost is estimated to be between $700 million and $755 million in 2007 dollars.[116] This estimate is subject to change as it can be affected considerably by several variables such as the timing of construction, availability of construction crews and components, and the final route selected by the Commission.[117]

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[109] *See* Applicant's February 8, 2010 Letter, filed 02/08/10, Doc. Id. 20102-46898-05.

[110] *See* Applicants' Post-Hearing Reply Brief at pp. 8-9.

[111] Ex. 102 at Schedule 3 (Poorker Direct).

[112] Ex. 2 at § 3.1.1.2 (Application).

[113] *Id*.

[114] Ex. 104 at p. 7 (Lennon Direct).

[115] Ex. 104 at p. 8 (Lennon Direct).

[116] Ex. 104 at p. 8 (Lennon Direct); Ex. 141 at p. 8 (Lennon Supplemental).

[117] Ex. 104 at p. 8 (Lennon Direct).

N. Substations

85. This Project includes the construction of four new substations and modifications to four existing substations. The four new substations are: Hazel Creek, Cedar Mountain, Helena, and Hampton.[118] The existing substations are: Brookings County (South Dakota), Lyon County, Minnesota Valley, and Lake Marion.[119]

86. Applicants' proposed site for the Hazel Creek Substation for the Modified Preferred Route is located at the southeast corner of the intersection of 520th Street (County Road B3) and 260th Avenue.[120] As this location is also located along the Alternate Route, this is also Applicants' proposed substation site for the Alternate Route.[121] The substation fenced and graded area will be approximately 10 to 12 acres depending on final route selection and final substation design.[122]

87. Applicants' proposed site for the Cedar Mountain Substation for the Modified Preferred Route is located in Camp Township, Renville County at the northwest corner of the intersection of County Road 3 and 640th Avenue.[123] Along the Alternate Route, the Applicants' proposed substation site for the Cedar Mountain Substation is in Birch Cooley Township, Renville County, on the west side of 380th Street, ¼ mile north of County Highway 12.[124] The new Cedar Mountain Substation will require five to eight acres of fenced and graded area depending on the final route selection and final substation design.[125]

88. Applicants' proposed site for the Helena Substation for the Modified Preferred Route is located on the southeast corner of the intersection of 231st Avenue and 320th Street (County Road 28) in Derrynane Township in Le Sueur County.[126] For the Alternate Route, Applicants propose a substation site located along West 270th Street between Church Avenue and Aberdeen Avenue in Belle Plaine Township in Scott County.[127] The new Helena Substation will require approximately five to eight acres of fenced and graded area depending on final route selection and final substation design.[128]

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[118] Ex. 2 at § 2.4 (Application); Ex. 102 at p. 20 (Poorker Direct).

[119] *Id*.

[120] Ex. 102 at p. 21 (Poorker Direct).

[121] *Id*.

[122] *Id*.

[123] *Id*.

[124] Ex. 102 at p. 22 (Poorker Direct).

[125] *Id*.

[126] *Id*.

[127] *Id*.

[128] Ex. 102 at p. 22 (Poorker Direct).

89. Applicants have two possible substation sites for the new Hampton Substation, each of which are located on the west side of Highway 52 near 215th Street.[129] One of these substation sites is located on the north side of 215th Street and the other is located on the south side of 215th Street.[130] Applicants selected these two possible substation sites in coordination with the CapX2020 Hampton – Rochester – La Crosse 345 kV Project team as this new 345 kV line will also connect at the Hampton Substation.[131] These two sites were identified because they are compatible with the Modified Preferred Route and Alternate routes (including Alternative 6P-06) for this Project and are compatible with routes under consideration for the Hampton – Rochester – La Crosse 345 kV Project.[132] These sites also minimize the length of connection to the existing Prairie Island – Blue Lake 345 kV line while providing road access to the sites.[133] The new Hampton Substation will require approximately three to five acres of fenced and graded area depending on final route selection and final substation design.[134]

90. Applicants do not anticipate that additional land will be required to accommodate the equipment additions at the existing Minnesota Valley Substation.[135] The existing Lyon County Substation will be expanded within the boundaries of the current Xcel Energy substation property by adding four to six acres of fenced and graded substation area.[136] The substation expansion is proposed to extend north and east of the existing substation area and should not require the acquisition of additional land.[137] The Project will require an expansion of the existing Lake Marion Substation to the south.[138] Applicants intend to acquire up to 25 acres of additional land to the south of the existing Lake Marion Substation.[139] An area of five to eight acres of fenced and graded substation area will be required to accommodate additional equipment.[140]

91. The existing Franklin 115 kV Substation will be expanded to the north to accommodate the new 115 kV line from Cedar Mountain Substation.[141]

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[129] Ex. 102 at p. 23 (Poorker Direct).

[130] *Id*.

[131] *Id*.

[132] *Id*.

[133] *Id*.

[134] *Id*.

[135] Ex. 102 at p. 24 (Poorker Direct).

[136] *Id*.

[137] Ex. 102 at p. 24 (Poorker Direct).

[138] Ex. 102 at p. 25 (Poorker Direct).

[139] *Id*.

[140] *Id*.

[141] Ex. 102 at p. 20 (Poorker Direct).

O. Federal and State Agency Participation

92. Prior to filing the Application, Applicants contacted federal and state agencies and local governmental units to discuss the Project and involvement in the route development process.[142] In response to Applicants' outreach, the USFWS, United States of Army Corps of Engineers ("USACE"), United States Department of Agriculture – Farm Service Agency ("FSA"), United States Coast Guard, Minnesota Board of Water and Soil Resources ("BWSR"), MnDNR, Minnesota Department of Transportation ("Mn/DOT"), Minnesota State Historic Preservation Office ("SHPO"), Minnesota Department of Agriculture ("Mn/Ag."), OES, and numerous county and local governmental units became involved with this regulatory proceeding.[143]

1. Minnesota Department of Agriculture

93. Mn/Ag. raised several concerns regarding the impact of transmission line construction on agricultural land.[144] In response, Mn/Ag. and Applicants developed an Agricultural Impact Mitigation Plan ("AIMP") which addresses mitigation action, where possible, restoration of damaged tiles, removal of construction debris, and restoration of soil to existing pre-construction conditions.[145] The Mn/Ag. approved Applicants' AIMP in September 2009.[146]

2. United States Army Corps of Engineers

94. In April 2008, USACE informed Applicants that a USACE permit would be needed for the Project.[147] As part of the USACE permit process, an environmental review is necessary.[148] Applicants and OES entered into a concurrence agreement whereby the USACE will conduct part of its review of the Project in parallel with the routing process.[149]

3. Minnesota Department of Transportation

95. Mn/DOT owns or otherwise controls all state trunk highways, including freeways/interstate highways.[150] Mn/DOT shares oversight over a right-of-way with the

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[142] Ex. 2 at p. 10-1 (Application).

[143] Ex. 2 at p. 10-3 (Application).

[144] Ex. 2 at § 10.1.2.6 (Application).

[145] Ex. 102 at p. 26 (Poorker Direct).

[146] Ex. 102 at p. 27 (Poorker Direct).

[147] Ex. 2 at p. 10-5 (Application).

[148] Minn. R. Ch. 8810.3100 - .3600

[149] Minn. R. 8810.3300, subp. 1.

[150] Ex. 102 at p. 29 (Poorker Direct).

Federal Highway Administration to the extent the right-of-way has been acquired by Mn/DOT with federal funding.[151]

96. Mn/DOT's rules governing use of trunk highway rights-of-way are included in Minnesota Rules 8810.3100-.3600.[152]

97. Minnesota Rule 8810.3300, subp. 1 requires Applicants to obtain a permit from Mn/DOT to occupy state highway right-of-way, including interstate roads (also called freeways), and for crossings and longitudinal installations ("Utility Permit"). [153]

98. Mn/DOT follows the standards published in the *Mn/DOT Procedures for Accommodation of Utilities on Highway Right-of-Way, Mn/DOT Position Statement – Highways No. 6.4*, July 27, 1990, revised November 8, 2005 ("Accommodation Policy") when issuing Utility Permits.[154] The Accommodation Policy notes that it is in the public interest for utility facilities to be accommodated on any highway right-of-way when such use or occupancy does not conflict with provisions of federal, state, or local laws or regulations.[155]

99. Applicants identified several segments of the proposed routes that could require Utility Permits because they cross or parallel state trunk highways.[156]

100. There are also three trunk highways that may be crossed by or run parallel to power lines proposed for this Project, that are not part of the National Highway System or interstate system. These trunk highways are also subject to certain Federal Highway Administration requirements.[157]

101. There are three areas where the proposed routes will cross state highways: (1) on the Modified Preferred Route segments parallel to U.S. Highway 169; (2) on the Alternate Route, there is a segment that parallels Interstate I-35 for approximately seven miles between 57th Street West and the Lake Marion Substation; and (3) on the Modified Preferred Route, segments parallel Highway 52 for approximately 2.5 miles, depending on final alignment.[158] The affected sections of Highway 52 and U.S. Highway 169 are not freeways.[159]

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[151] *Id*.

[152] Ex. 102 at pp. 29-30 (Poorker Direct).

[153] Ex. 102 at p. 27 (Poorker Direct).

[154] Ex. 102 at p. 30 (Poorker Direct).

[155] Ex. 102 at p. 30 (Poorker Direct); Ex. 102 at Schedule 19 (Poorker Direct).

[156] Ex. 102 at pp. 27-28 (Poorker Direct); Applicants February 8, 2010 Letter at Attachments 2-3, filed 02/08/10, Doc. Id. 20102-46898-05.

[157] Ex. 140 at Schedule 47 at pp. 2, 10-11 (Poorker Supplemental).

[158] Ex. 102 at pp. 27-28 (Poorker Direct).

[159] Ex. 102 at p. 27 (Poorker Direct).

102. On April 30, 2009, Mn/DOT filed a comment letter on the scope of the EIS.[160] In this letter, Mn/DOT expressed concerns about alignments that would be situated within 75 feet of trunk highway right-of-way.[161] Mn/DOT also stated concerns regarding the proximity of the proposed transmission lines to trunk highway right-of-way and how this may affect Mn/DOT's maintenance, reconstruction, or new construction of roads and interchanges.[162]

103. In its April 30, 2009 letter, Mn/DOT also advised that a Utility Permit would be required for occupancy of any portion of Mn/DOT's road right-of-way.[163] Mn/DOT indicated this would include any intrusions in the airspace above the right-of-way or "overhang."[164] This includes permanent encroachments, where poles are placed outside but near the right-of-way and have pole arms overhanging into the right-of-way and intermittent encroachments, where the transmission wire intermittently blows into the right-of-way under certain weather conditions (*e.g.*, "blow-out").[165]

104. On November 30, 2009, Mn/DOT filed a comment letter on the DEIS.[166] In this letter, Mn/DOT advised that it would be unable to issue a Utility Permit for the proposed alignment in a segment of the Applicants' Modified Preferred Route at Le Sueur.[167] Mn/DOT observed that the Modified Preferred Route would "run through a scenic easement area located near the rest area adjacent to U.S. Highway 169."[168] Mn/DOT stated "that removal of significant mature woodland vegetation would be required to construct the HVTL along the proposed route" and therefore was prohibited by federal requirements.[169] While there are exceptions to these prohibitions, Mn/DOT concluded that it "has not seen a route that would not require extensive tree removal or alteration of trees in the scenic area. Therefore, it believes it would be unable to issue a permit in this location."[170]

105. Based on Mn/DOT's November 30, 2009 letter, Applicants reevaluated the alignment of the Modified Preferred Route in the vicinity of the Minnesota River Valley Safety Rest Area to determine if there were any modifications that could alleviate

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[160] Ex. 511; Ex. 102 at Schedule 20 (Poorker Direct).

[161] Ex. 511; Ex. 102 at p. 31 and Schedule 20 (Poorker Direct).

[162] Ex. 511; Ex. 102 at Schedule 20 (Poorker Direct).

[163] Ex. 102 at p. 31 and Schedule 20 (Poorker Direct); Seykora Vol. 3 at pp. 183-184.

[164] Ex. 102 at p. 31 and Schedule 20 (Poorker Direct); Seykora Vol. 3 at p. 184.

[165] Ex. 102 at pp. 31-32 and Schedule 20 (Poorker Direct); Seykora Vol. 3 at pp. 183-184.

[166] Ex. 309 (Mn/DOT November 30, 2009 Comment Letter); Ex. 140 at Schedule 47 (Poorker Supplemental).

[167] Ex. 309 at p. 12 (Mn/DOT November 30, 2009 Comment Letter); Seykora Vol. 3 at p. 175.

[168] Ex. 309 at p. 12 (Mn/DOT November 30, 2009 Comment Letter).

[169] Ex. 309 at p. 12 (Mn/DOT November 30, 2009 Comment Letter).

[170] *Id*.

Mn/DOT's concerns.[171] On December 14, 2009, Applicants developed a new alignment generally within the 4,700-foot wide route that avoided Mn/DOT's scenic easements ("Myrick Alternative").[172]

106. The Myrick Alternative follows the north side of the U.S. Highway 169 corridor across the Minnesota River.[173] Approximately 900 feet west of the State Highway 112 exit ramp the centerline heads southeast, crossing U.S. Highway 169.[174] After crossing U.S. Highway 169, the route turns slightly, but remains in the southeast direction for 0.2 miles (approximately 1,250 feet), crossing State Highway 112 and into Mayo Park in the City of Le Sueur.[175] The route continues through Mayo Park, turning east at Forest Prairie Road (County Road 28) paralleling the north side of road, a distance of approximately 0.27 miles (approximately 1,425 feet).[176] The route then crosses Forest Prairie Road, turning in the southeast direction for 1,250 feet, crossing through a woodland bluff area and farm field line for approximately 4,300 feet.[177] The route then follows Myrick Street for 0.4 miles (approximately 2,080 feet), where it heads directly east for 0.3 miles (approximately 1,900 feet) along a field line and narrow woodland, crossing a Minnesota County Biological Survey (MCBS) moderate biodiversity area, connecting with the Applicants' Modified Preferred Route on 320th Street.[178]

107. Applicants will need a route width of approximately 4,700 feet for the Modified Preferred Route in the vicinity of the Minnesota River Valley Safety Rest Area to utilize the Myrick Alternative.[179]

108. On February 8, 2010, Mn/DOT sent a letter to the ALJ to provide additional comments regarding the Project.[180] In its letter, Mn/DOT reiterated that the Utility Accommodation Policy seeks to allow utilities to occupy portions of the highway rights-of-way where such occupation does not put the safety of the traveling public or highway workers at risk or unduly impair the public's investment in the transportation system.[181]

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[171] Ex. 140 at p. 11 (Poorker Supplemental).

[172] *Id*.

[173] Ex. 140 at p. 12 (Poorker Supplemental).

[174] *Id*.

[175] *Id*.

[176] *Id*.

[177] *Id*.

[178] Ex. 140 at p. 12 (Poorker Supplemental).

[179] Ex. 140 at p. 11 (Poorker Supplemental).

[180] Mn/DOT February 8, 2010 Letter at p. 1, filed 02/08/10, Doc. Id. 20102-46900-07.

[181] *Id.*

109. In its February 8, 2010 letter, Mn/DOT supports the designation of wide route widths along and across highway rights-of-way.[182] Mn/DOT wrote: "Mn/DOT respectfully requests that the selected route at these locations be as wide as the full width of the routes proposed in the CapX2020 application. This would be sufficiently wide to enable Mn/DOT and CapX2020 to examine each pole location to determine where the [high voltage transmission line] HVTL can be placed to accommodate the needs of both parties."[183]

4. United States Fish and Wildlife Service and Minnesota Department of Natural Resources

110. Beginning in December 2008, USFWS began providing comments to Applicants regarding the Project.[184]

111. USFWS submitted written comments to Applicants on December 3, 2008.[185]

112. In its December 3, 2008 letter, USFWS provided some comments regarding the impacts of aerial obstructions on migratory birds and USFWS's plans to develop future wildlife habitat resources. USFWS stated that aerial obstructions, such as transmission lines, can adversely affect migratory birds, especially when located in migration corridors, if the lines are not sited or designed to minimize collisions ("bird strikes") and electrocution.[186] USFWS informed Applicants of its plans to acquire lands and develop habitat resources in the Project corridor.[187]

113. In its December 3, 2008 letter, USFWS also expressed a preference for the Project to cross the Minnesota River at Le Sueur instead of Belle Plaine.[188] USFWS stated that Belle Plaine has more continuous native flood plain habitat than Le Sueur.[189] Also, the Belle Plaine crossing location has an existing transmission line, so adding a new transmission line in the same location would result in obstructions occupying a larger 3-dimensional area and would increase the likelihood of bird strikes.[190] USFWS noted that there are records of bald eagles at the Belle Plaine crossing.[191]

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[182] *Id.*

[183] *Id.*

[184] Ex. 140 at Schedule 42 (Poorker Supplemental).

[185] *Id*.

[186] Ex. 140 at Schedule 42 at p. 1 (Poorker Supplemental).

[187] *Id*.

[188] Ex. 140 at Schedule 42 at p. 2 (Poorker Supplemental).

[189] *Id*.

[190] *Id*.

[191] *Id*.

114. On March 5, 2009, USFWS provided comments to OES in which it stated that additional research was being conducted on the environmental impacts resulting from crossing the Minnesota River at Le Sueur and Belle Plaine.[192]

115. On April 30, 2009, USFWS submitted additional comments to the Commission. USFWS identified a large year-round bald eagle population, high concentrations of waterfowl during migratory periods and a heron rookery within the proposed Le Sueur crossing corridor.[193] Due to the presence of these species, USFWS supported the Le Sueur crossing only if a non-aerial construction method were used.[194] If a non-aerial crossing were not feasible, USFWS recommended the Lower Minnesota River crossing be at Belle Plaine utilizing either a non-aerial method or an aerial method which combined the existing 69 kV line and the Project on the same structures.[195] USFWS proposed "the Preferred Route be followed to a point southwest of the City of Arlington where the transmission line would then be routed north to the Alternate Route…[o]nce the transmission line has been routed to the Alternate Route the line should proceed east and cross the Minnesota River within the existing 69 kV transmission line right-of-way in the vicinity of Belle Plaine."[196] After the Minnesota River is crossed, USFWS suggested the transmission line follow the Alternate Route to the Helena Substation North Area.[197]

116. On November 30, 2009, USFWS provided written comments to OES regarding items in the DEIS that required further clarification.[198] In particular, USFWS sought additional information regarding non-aerial river crossings at Le Sueur and Belle Plaine.[199]

117. In response to USFWS, Applicants also evaluated several non-aerial construction methods: connecting the new transmission line to the U.S. Highway 169 bridge, attaching the new transmission line to a stand alone pier that would be constructed next to the U.S. Highway 169 bridge, and undergrounding the new 345 kV transmission line.[200]

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[192] Ex. 140 at Schedule 43 (Poorker Supplemental).

[193] Ex. 140 at Schedule 44 at p. 1 (Poorker Supplemental).

[194] *Id*.

[195] Ex. 140 at Schedule 44 at pp. 1-2 (Poorker Supplemental).

[196] *Id*.

[197] *Id*.

[198] Ex. 140 at Schedule 46 at pp. 1-3 (Poorker Supplemental).

[199] Ex. 140 at Schedule 46 at pp. 1-2 (Poorker Supplemental).

[200] Ex. 140 at pp. 4-5 (Poorker Supplemental).

118. MnDNR also provided written comments to OES on November 30, 2009.[201]

119. In its November 30, 2009 letter, MnDNR opined that a Belle Plaine crossing by way of the USFWS/MnDNR Alternative "appears to be the most protective of the Minnesota River."[202] If the Lower Minnesota River crossing occurs at Le Sueur, MnDNR requested the Modified Preferred Route avoid Buck's Lake.[203] MnDNR did not state any preferences for the crossings of the Minnesota River.[204]

120. On February 8, 2010, USFWS sent a letter to Applicants regarding the Minnesota River crossings near Le Sueur and Belle Plaine and how the proposed transmission lines could affect bald and golden eagles populations in these areas.[205] In its letter, USFWS concludes that "both the proposed Le Sueur and Belle Plaine crossings will likely disturb nesting, foraging, and winter roosting eagles. Both Bald Eagles and Golden Eagles are present in the Minnesota River Valley. The placement of the power line crossing in an area of such high eagle concentration and in a major movement corridor (the Minnesota River) can reasonably be expected to cause eagle mortality through both line collisions and electrocution."[206] The letter further states that "erecting structures in this high eagle concentration area will encourage eagles to nest on poles and transmission lines, causing electrocution of the eagles and damage to the power lines (electrical shorts, fires, power outages)." [207]

121. In its letter, USFWS urged Applicants to further analyze both the economic and technological feasibility of a non-aerial line at any Minnesota River crossing."[208]

122. On February 8, 2010, the MnDNR filed comments regarding the FEIS.[209] In these comments MnDNR encouraged the Applicants to coordinate directly with MnDNR "through a pre-application meeting(s) concerning impacts to DNR administered lands, public waters, public water wetlands, and state-listed species prior to application for water permits and utility licenses to cross public lands and public waters. The applicant is encouraged to further develop mitigation plans for impacts related to these resources and review these with the DNR prior to applying for any DNR permits."[210]

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[201] Ex. 140 at Schedule 49 (Poorker Supplemental).

[202] Ex. 140 at Schedule 49 at p. 3 (Poorker Supplemental).

[203] Ex. 140 at Schedule 49 at p. 2 (Poorker Supplemental).

[204] Ex. 140 at Schedule 49 at p. 3 (Poorker Supplemental).

[205] USFWS February 8, 2010 Letter at p. 1, filed 2/9/10, Doc. Id. 20102-46903-01.

[206] USFWS February 8, 2010 Letter at p. 1, filed 2/9/10, Doc. Id. 20102-46903-01.

[207] *Id*.

[208] *Id*.

[209] MnDNR February 8, 2010 Letter at p. 1, filed 2/10/10, Doc. Id. 20102-46952-01.

[210] *Id*.

123. OES expressed concern that the Applicants have not been sufficiently specific regarding technical aspects of the proposed HVTL, particularly regarding the Minnesota River crossing. The Applicants responded with a recitation of the anticipated impacts of the HVTL, particularly with respect to the Myrick Street Alternative.[211]

124. While it is true that there are aspects of the HVTL placement for which detail has not been supplied, there is significant uncertainty as to where the HVTL will be placed, particularly with regard to where the line will be crossing the Minnesota River. That choice is ultimately the Commission's to make and it will affect significant segments of the route on either side of the river. The Applicants have provided adequate information to make the decisions required for the issuance of the route permit requested in this proceeding. The details sought by OES will be forthcoming when the route permit has identified the corridor through which the HVTL will be run. Further, since the Minnesota River crossing is subject to the issuance of permits from other agencies, there is a limit to what commitments the Applicants can reasonably make in this proceeding. The Applicants will need the flexibility to meet the conditions that may be imposed by those other agencies with jurisdiction over aspects of the HVTL.

5. OES Environmental Review

125. Minnesota statutes and rules require OES to prepare an EIS for the Project.[212]

126. The scoping process is the first step in developing an EIS. OES "shall provide the public with an opportunity to participate in the development of the scope of the environmental impact statement by holding a public meeting and by soliciting public comments."[213] During the scoping process, alternative routes may be suggested for evaluation in the environmental impact statement.[214]

127. The scoping process "must be used to reduce the scope and bulk of an environmental impact statement by identifying the potentially significant issues and alternatives requiring analysis and establishing the detail into which the issues will be analyzed."[215]

128. At the conclusion of the scoping process, OES must issue a scoping decision which shall address at least the following: 1) the issues to be addressed in the

[211] Applicants' Reply Brief, at 11-13.

[212] Minn. R. 7850.2500, subp. 1.

[213] Minn. R. 7850.2500, subp. 2.

[214] Minn. R. 7850.2500, subp. 3.

[215] Minn. R. 7850.2500, subp. 4.

EIS; 2) the alternative sites and routes to be addressed in the EIS; and 3) the schedule for completion of the EIS.[216]

129. From March 30, 2009 to April 9, 2009, OES held 12 public meetings regarding the scope of the EIS.[217] OES staff also collected and reviewed comments on the scope of the EIS by convening two advisory task forces (Lake Marion to Hampton Task Force and Minnesota River Crossing to New Prague Task Force).[218]

130. The public suggested over 297 route alternatives to the Applicants' proposed routes during the EIS scoping process.[219] Of these, 197 expressed either opposition or preference for the Applicants' Preferred Route, or their Alternative Route, or no project at all.[220] Of the remaining 100 route alternatives, several were duplicates, 26 were alignment alternatives and 74 fell outside the requested route width and were categorized as route alternatives.[221]

131. On June 30, 2009, OES issued its Scoping Decision for the EIS. The Scoping Decision identified the topics to be covered in the Project EIS: Regulatory framework; Project engineering and design; Project construction; and Human and environmental resources impacted by the Project and each proposed route alternative.[222] The Scoping Decision also determined that the EIS would address 47 of the proposed route alternatives.[223]

132. The next step in OES's environmental review required OES to publish the DEIS and to schedule informational meetings, which provide an opportunity for the public to comment on the DEIS.[224]

133. On October 21, 2009, OES published the DEIS which included a discussion of all of the alternatives and topics required by the Scoping Decision.[225]

134. From November 12, 2009 to November 19, 2009, OES held 10 informational meetings for the public to comment on the DEIS.[226]

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[216] Minn. R. 7850.2500, subp. 4.

[217] Ex. 23 at p. 3-2 (DEIS).

[218] *Id*.

[219] Ex. 16 at p. 4 (EIS Scoping Decision).

[220] *Id*.

[221] *Id*.

[222] Ex. 16 at p. 4-6 (EIS Scoping Decision).

[223] Ex. 16 at p. 4-6 (EIS Scoping Decision).

[224] Minn. R. 7850.2500, subps. 6-7.

[225] Ex. 23 (DEIS).

[226] Ex. 24 (October 20, 2009 OES Notice regarding DEIS Public Meetings).

135. Minnesota rules require OES to "respond to timely substantive comments received on the draft environmental impact statement consistent with the scoping decision and prepare the final environmental impact statement."[227] OES may "attach to the draft environmental impact statement the comments received and its response to comments without preparing a separate document."[228]

136. A total of 272 written and oral comments were received by OES during the DEIS comment period.[229]

137. On January 26, 2010, OES published the FEIS.[230]

P. Public Comments

138. On November 24, 2009, the City of Lakeville submitted a letter to the ALJ regarding route alternatives 6P-01, 6P-04, and 6P-05, all of which include a segment along CSAH 70 that runs south of the City of Lakeville. The City of Lakeville letter states that these alternatives are "not reasonable alternatives for the City of Lakeville." The City of Lakeville letter states there "are 1,330 square feet of industrial buildings that are within the 150 foot right-of-way of 6P-01." This letter further states that "[c]onstruction of 345 kV transmission lines as shown in alternatives 6P-01/04/05 through Lakeville would be difficult as the corridor is congested with existing public utilities. Additional transmission lines would not only be difficult to locate in this corridor, but the ability to access and maintain all utilities in the ROW would be compromised."[231]

139. On December 14, 2009, the City of Farmington submitted a letter to the ALJ regarding route alternatives 6P-01, 6P-04, and 6P-05. The City of Farmington's letter notes that "there is already an existing HVTL along CSAH 50, which runs south of the City of Farmington, and Denmark Avenue as it relates to 6P-01 and part of 6P-05. Installing another line would create a double row of these structures through the area. These lines would traverse populated areas adjacent to homes, schools, and churches." CSAH 50 runs south of the City of Farmington.[232]

140. During the public comment period, the City of Hampton submitted a resolution to the ALJ that was adopted by the City Council of the City of Hampton of April 14, 2009. The City of Hampton passed a resolution that stated "if it is determined that the CapX2020 Brookings 345 kV transmission line must be extended to the City of Hampton, then it should be located as far as possible outside the City of Hampton to

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[227] Minn. R. 7850.2500, subp. 9.

[228] *Id.*

[229] FEIS at p. 5.

[230] *See* FEIS.

[231] City of Lakeville November 24, 2009 Letter, filed 12/29/09, Doc. Id. 200912-45443-05.

[232] City of Farmington December 14, 2009 Letter, filed 12/29/09, Doc. Id. 200912-45443-05.

mitigate the impacts of the substation and 345 kV transmission line on the City of Hampton, its residents, and business community."[233]

141. On December 28, 2009, Shannon and Troy Anderson, along with their two children, submitted a letter to the ALJ regarding route Alternatives 6P-06 and 6P-03. The Andersons indicated that along 6P-03 and 6P-06 "[t]here is the Klaus Horse Farm, two boarding Kennels, Ginseng Farm, Hmong gardening, Duff's honey bees and cattle and many agricultural farmers."[234]

142. On January 5, 2010, the City of Le Sueur submitted a letter to the ALJ regarding comments the City provided regarding the Preferred Route. The City of Le Sueur clarified that its proposal to offer the use of the City of Le Sueur's "existing transmission corridor/easement was made on the presumption that the stated 'Preferred Route' was the inevitable route as it approached the Minnesota River." The City of Le Sueur clarified that its proposal was "only made with the understanding that IF WE WERE GOING TO BE COMPELLED TO DEAL WITH A TRANSMISSION LINE CROSSING we wished to try to lessen its effect on our citizens, natural resources and neighbors." The City of Le Sueur stated that its position was to support crossing the Minnesota River Valley along the "northern route in the Belle Plaine area."[235]

143. On January 12, 2009, Eureka Township submitted a letter to the ALJ and attached a resolution adopted by the Town Board on September 8, 2008. The resolution stated that the Township Board preferred a route that followed CSAH 70 to the north of Eureka Township rather than through Eureka Township.[236]

144. On January 28, 2010, Bimeda, Inc. ("Bimeda") submitted a letter to the ALJ regarding the Myrick Street Alignment Alternative. Bimeda is a manufacturer of animal health pharmaceutical dosage forms and one of its manufacturing plants is located in Le Sueur, Minnesota. Bimeda stated that the Myrick Street Alignment Alternative passes near the manufacturing plant and could be between 50-100 feet from Bimeda's manufacturing plant and 20,000 gallon isopropyl alcohol tank. Additionally, Bimeda suggested that "[t]he Alternate Route through Belle Plaine as the route for the Transmission Line would avoid the dangerous interaction between the Transmission Line and the flammable nature of the isopropyl alcohol that is stored in the tank farm and used for manufacturing products on the property owned by Bimeda."[237]

145. On December 14, 2009, Judy and Francis Maeyaert submitted a letter to the ALJ regarding alternate route 1A-01. In their letter, the Maeyaerts indicated that alternate route 1A-01 does not follow section lines and could split fields. The Maeyaerts

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[233] City of Hampton April 14, 2009 Resolution, filed 12/29/09, Doc. Id. 200912-45443-01.

[234] Pub. Comm., Anderson December 28, 2009 Letter, filed 12/31/09, Doc. Id. 200912-45546-03.

[235] City of Le Sueur January 5, 2010 Letter, filed 01/11/10, Doc. Id. 20101-45824-01.

[236] Eureka Township January 12, 2010 Letter, filed 01/22/10, Doc. Id. 20101-46263-03.

[237] Bimeda Corp. January 28, 2010 Letter, filed 01/29/10, Doc. Id. 20101-46568-02.

stated they "believe that the only practical route for their electric power line is somewhere north of Marshall," Minnesota.[238]

146. On January 15, 2010, Becky and Francis Engels submitted a letter to the ALJ regarding alternate route 1P-02. This particular alternate route crosses through the middle of one of the Engels' farm fields. The Engels voiced concerns about soil compaction and the loss of a half-mile of trees used as a field windbreak. The Engels stated that "[t]he route preferred by the utility follows roads, which is much more sensible."[239]

147. The foregoing findings reflect a very small sampling of the public comment received in this proceeding. More detailed summaries of the oral and written comment received is attached to this Report.[240]

CRITERIA FOR A ROUTE PERMIT

148. The PPSA requires that route permit determinations "be guided by the state's goals 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."[241]

149. Under the PPSA, the Commission and ALJ must be guided by the following responsibilities, procedures and considerations:

> (1) evaluation of research and investigations relating to the effects on land, water and air resources of large electric power generating plants and high voltage transmission lines and the effects of water and air discharges and electric and magnetic fields resulting from such facilities on public health and welfare, vegetation, animals, materials and aesthetic values, including baseline studies, predictive modeling, and evaluation of new or improved methods for minimizing adverse impacts of water and air discharges and other matters pertaining to the effects of power plants on the water and air environment;
>
> (2) environmental evaluation of sites and routes proposed for future development and expansion and their relationship to the land, water, air and human resources of the state;
>
> (3) evaluation of the effects of new electric power generation and transmission technologies and systems related to power plants designed to minimize adverse environmental effects;

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[238] Pub. Comm., Maeyaert December 14, 2009 Letter, filed 01/11/10, Doc. Id. 20101-45824-01.

[239] Pub. Comm., Engels January 15, 2010 Letter, filed 01/22/10, Doc. Id. 20101-46263-02.

[240] *See* Attachment 1.

[241] Minn. Stat. § 216E.03, subd. 7.

(4) evaluation of the potential for beneficial uses of waste energy from proposed large electric power generating plants;[242]

(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 cannot be avoided should the proposed site and route be accepted;

(7) evaluation of alternatives to the applicant's proposed site or route proposed pursuant to subdivision 1 and 2;

(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 so as to minimize interference with agricultural operations;

(10) evaluation of future needs for additional high voltage transmission lines in the same general area as any proposed route, and the advisability of ordering the construction of structures capable of expansion in transmission capacity through multiple circuiting or design modifications;

(11) evaluation of irreversible and irretrievable commitments of resources should the proposed site or route be approved; and

(12) when appropriate, consideration of problems raised by other state and federal agencies and local entities.[243]

150. In addition to the PPSA, Minn. R. 7850.4000 provides that no route permit may be issued in violation of site selection criteria and standards found in Minnesota Statutes or Public Utilities Commission Rules. Power line permits must be consistent with state goals to minimize environmental impacts and conflicts with human settlement and other land use. The Commission and ALJ are governed by Minn. R. 7850.4100, which provides for the following factors to be considered 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;

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[242] This evaluation is not required since Applicants have not applied for a route permit for a large electric generating plant.

[243] Minn. Stat. § 216E.03, subd. 7.

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;[244]

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;

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

N. irreversible and irretrievable commitments of resources.

151. There is sufficient evidence on the record for the Commission to assess the proposed routes and alternatives using the criteria set out above.

APPLICATION OF STATUTORY AND RULE CRITERIA

I. Application of Routing Factors to the 345 kV Transmission Line

A. Effects on Human Settlement

152. Minnesota statutory and rule routing criteria for high voltage transmission lines require consideration of the proposed transmission line route's effect on human settlement, including displacement of residences and businesses; noise created during

[244] This criterion is inapplicable since Applicants have not applied for a permit for a large electric generating plant.

construction and by operation of the Project; and impacts to aesthetics, cultural values, recreation and public services.[245]

1. Displacement

153. For purposes of this proceeding, displacement of a residence or business was defined to occur when a structure is within 75 feet of the proposed route centerline.[246]

154. Applicants do not anticipate that construction of the 345 kV line along the Modified Preferred Route, Alternate Route, or Crossover Route would result in any displacement of residences or businesses.[247] However, accommodating Minnesota Department of Transportation (DOT) right of way may bring some homes within 75 feet of the route centerline on 220th Street (Highway 50) in the Hampton area.

155. For the Modified Preferred Route, the Applicant found there are no homes within 0-75 feet from the route centerline, 30 homes are within 75-150 feet from the route centerline, 140 homes are within 150-300 feet from the route centerline; and 134 homes within 300-500 feet from the route centerline.[248] In total, 304 homes are 0-500 feet from the route centerline.[249] If the route centerline is sited north of Highway 50, the Grilz home would be within 75 feet of the centerline.

156. For the Alternate Route, there are no homes within 0-75 feet from the route centerline; 28 homes are within 75-150 feet from the route centerline; 136 homes are within 150-300 feet of the route centerline; and 155 homes are within 300-500 feet from the route centerline.[250] In total, 319 homes are 0-500 feet from the route centerline.[251]

157. For the Crossover Route, there are no homes within 0-75 feet from the route centerline; 29 homes are 75-150 feet from the route centerline; 147 homes are 150-300 feet from the route centerline; and 148 homes are 300-500 feet from the route centerline.[252] In total, 324 homes are 0-500 feet from the route centerline.[253]

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[245] Minn. Stat. § 216E.03, subd. 7(b); Minn. R. 7850.4100(A).

[246] Ex. 2 at p. 6-11 (Application).

[247] Ex. 2 at p. 4-10, p. 6-11 (Application); Ex. 102 at p. 17 (Poorker Direct).

[248] Ex. 2 at p. 6-12 (Application); Ex. 102 at Schedule 3 (Poorker Direct); Ex. 102 at pp. 17-18 (Poorker Direct).

[249] Ex. 2 at p. 6-12 (Application); Ex. 102 at Schedule 3 (Poorker Direct); Ex. 102 at pp. 17-18 (Poorker Direct).

[250] Ex. 2 at p. 2 (Application, Appendix E1).

[251] *Id*.

[252] Applicants January 19, 2010 Letter at Route Impact Table, filed 01/19/10, Doc. Id. 20101-46155-01.

[253] *Id*.

158. The record confirms that the Modified Preferred Route has fewer homes within 0-500 feet from the route centerline compared to the Alternate Route and the Crossover Route. If the Modified Preferred Route is modified further to incorporate Alternative 6P-06, even fewer homes would be within 0-500 feet from the centerline compared to the Modified Preferred Route.

2. Noise

159. The Minnesota Pollution Control Agency ("MPCA") has established standards for the regulation of noise levels.[254]

160. For residential, commercial and industrial land, the MPCA noise limits are 60-65 A-weighted decibel ("dBA") during the daytime and 50-55 dBA during the nighttime.[255]

161. Transmission lines produce noise under certain conditions. The level of noise depends on conductor conditions, voltage level and weather conditions. Generally, activity related noise levels during the operation and maintenance of transmission lines are minimal and do not exceed the MPCA Noise Limits outside the right-of-way.[256]

162. Assessing the anticipated noise that will be generated by the proposed transmission lines was accomplished using the Bonneville Power Administration CFI8X model to evaluate audible noise from high voltage transmission lines. Where possible, the model utilized a worst-case scenario benchmark, to ensure that noise was not under-predicted.[257]

163. The audible noise levels for the Modified Preferred Route, Alternate Route, and Crossover Route are not predicted to exceed the MPCA Noise Limits outside the right-of-way.[258]

3. Aesthetics

164. Construction of the facilities along the Modified Preferred Route, Alternate Route, or Crossover Route will likely affect visual quality and area aesthetics within close proximity of the transmission line.[259] Specifically, such effects can occur where the Modified Preferred Route, Alternate Route, and Crossover Route cross the

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[254] Minn. R. 7030.0050; Ex. 2 at p. 6-13 (Application).

[255] Ex. 2 at p. 6-13 (Application).

[256] *Id*.

[257] Ex. 2 at p. 6-14 (Application).

[258] *Id*.

[259] Ex. 2 at § 6.2.5 (Application).

Minnesota River, are located near recreational resources, and placed near residences within 0-500 feet from the route centerline.[260]

165. Applicants recognize the transmission lines will be a contrast to the surrounding land. Applicants pledged to continue working with landowners and public agencies to identify concerns related to the transmission line and aesthetics. Several potential mitigative measures have been identified.[261]

166. Examples of the mitigative measures that have been proposed by Applicants include: using uniform structures to the extent practical; placing structures at the maximum feasible distance away from scenic highways, waterways, and trail crossings; collocating new facilities with existing transmission lines or locating in areas where compatible land uses have been identified by the public and public agencies; conducting construction and operation in a manner that prevents any unnecessary destruction, scarring or defacing of the natural surroundings; and paralleling existing rights-of-way.[262] Additionally, Applicants have identified crossing points with the shortest distance for river crossings.[263]

167. The aesthetic impacts differ among the Modified Preferred Route, Alternate Route, and Crossover Route. The Modified Preferred Routes will cause the least amount of aesthetic impacts, and fewer still if Alternative 6P-06 is incorporated. The Modified Preferred Route including use of Alternative 6P-06, is shorter in distance than the Alternate Route or Crossover Route.[264] As a result, the Modified Preferred Route will use fewer poles. In comparison to the Alternate Route and Crossover Route, there are fewer residences within 500 feet of the Modified Preferred Route, and fewer still if Alternative 6P-06 is accepted.[265] Also, the Alternate Route and Crossover Route cross the Minnesota River where it is designated "scenic" whereas the Modified Preferred Route does not cross the Minnesota River where it is designated "scenic".[266]

168. In light of the factors noted in the preceding Finding, the record confirms that the Modified Preferred Route, and that Route with Alternative 6P-06 included, have fewer aesthetic impacts compared to the Alternate Route and the Crossover Route.

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[260] Ex. 2 at pp. 6-16-17 (Application).

[261] Ex. 2 at § 6.2.5.2 (Application).

[262] Ex. 2 at §§ 6.2.5, 8.2.5 (Application).

[263] Ex. 2 at p. 6-18 (Application).

[264] Ex. 102 at p. 9 (Poorker Direct); Ex. 2 at 5-6 (Application); Ex. 140 at p. 7 (Poorker Supplemental).

[265] Ex. 102 at p. 17-18 (Poorker Direct); Ex. 2 at 4-10 (Application); Applicants January 19, 2010 Letter to the ALJ at Route Impact Table, filed 01/19/10, Doc. Id. 20101-46155-01.

[266] Ex. 2 at p. 4-10 (Application).

4. Cultural Values

169. The communities in the vicinity of the Project have cultural values arising out of the prevalence of rural agriculture and family-owned businesses.[267]

170. The proposed transmission lines will serve the region with a stable power supply for years to come without compromising the area's cultural values. As western and southern Minnesota continue to grow and the economic base there continues to expand, the available power supplied may enhance the economic environment in which to live and work.[268]

171. There are no anticipated impacts to cultural values by constructing the Project along the Modified Preferred Route if Alternative 6P-06 is adopted (which will avoid the crossing of property occupied by a Buddhist Temple in Hampton), Alternate Route, or Crossover Route.[269]

5. Recreation

172. There are outdoor recreational opportunities along the Modified Preferred Route, the Alternate Route, and the Crossover Route which include snowmobiling, biking, hiking, canoeing, boating, fishing, camping, swimming, hunting, and nature observation.[270]

173. The Minnesota River Valley, Wildlife Management Areas ("WMAs"), Scientific Natural Areas ("SNAs"), snowmobile trails, state parks, and the Highway 75 King of Trails are examples of recreation areas along the Modified Preferred Route, the Alternate Route, and the Crossover Route.[271]

174. There are four WMAs along the Modified Preferred Route, resulting in an estimated 220 square feet of permanent impacts. There are 12 snowmobile trails crossed by this route. There is also one SNA, but no Waterfowl Protection Areas ("WPAs") within a mile of the Modified Preferred Route.[272]

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[267] Ex. 2 at p. 6-24 (Application).

[268] Ex. 2 at pp. 6-24, 6-25, and 8-13 (Application).

[269] Ex. 2 at p. 4-10 (Application).

[270] Ex. 2 at pp. 6-26, 8-13 (Application).

[271] *Id*.

[272] Ex. 2 at 6-28 (Application); Ex. 102 at Schedule 3 (Poorker Direct); Ex. 102 at pp. 17-19 (Poorker Direct).

175. There are nine WMAs along the Alternate Route, resulting in an estimated 495 square feet of permanent impacts. There are 16 snowmobile trails crossed by this route. There is also one SNA and two WPAs within a mile of the Alternate Route.[273]

176. There are five WMAs along the Crossover Route, resulting in approximately 275 square feet of permanent impacts. There are no state parks, one SNA and one WPA within a mile of this route.[274]

177. The record confirms that the Modified Preferred Route has fewer impacts to recreation resources compared to the Alternate Route and the Crossover Route.

6. Public Services

178. Public services and facilities are generally defined as services provided by government entities, including hospitals, fire and police departments, schools, public parks, and water supply or wastewater disposal systems.[275]

179. Construction of the Project along the Modified Preferred Route, Alternate Route, and the Crossover Route is not anticipated to directly or indirectly affect the operation of any existing public services.[276]

180. No direct long-term impacts to public buildings or infrastructure are expected.[277]

181. During construction, Applicants will make efforts to minimize any disruption to public services or public utilities.[278] To the extent disruptions to public services occur, these would be temporary and the Applicants will work to restore service promptly.[279] Where any impacts to utilities have the potential to occur, Applicants will work with both landowners and local agencies to determine the most appropriate pole placement.[280]

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[273] Ex. 2 at pp. 4-10, 8-14, and 8-15 (Application).

[274] *See* Applicants January 19, 2010 Letter, filed 01/19/10, Doc. Id. 20101-46155-01.

[275] Ex. 2 at p. 6-28 (Application).

[276] Ex. 2 at pp. 6-30, 8-16 (Application).

[277] *Id*.

[278] *Id*.

[279] *Id*.

[280] *Id*.

B. Effects on Public Health and Safety

182. Minnesota high voltage transmission line routing criteria require consideration of the Project's effect on health and safety.[281]

183. Applicants will ensure that all safety requirements are met during the construction and operation of the proposed transmission line and Associated Facilities.[282]

184. The Project will be designed and constructed according to local, State, and National Electric Safety Code (NESC) standards regarding ground clearance, crossing utilities clearance, and building clearance.[283]

185. The proposed transmission lines will be equipped with protective devices (breakers and relays located where transmission lines connect to substations) to safeguard the public in the event of an accident or if the structure or conductor falls to the ground.[284]

186. In addition, the Associated Facilities will be properly fenced and accessible only by authorized personnel.[285]

1. Electric and Magnetic Fields

187. Minnesota Statute § 216E.03, subd. 7 requires consideration of the effects of electric and magnetic fields resulting from the Project on public health and welfare.[286]

188. Electric and magnetic fields ("EMF") are produced by natural sources and by the voltages and currents associated with our society's use of electric power.[287] Consequently, each of us every day encounters a wide variety of natural and man-made EMF.[288] For example, exposure to these fields happens at home when the television, lamp or fan is on; using the computer to send e-mail; using a washer or dryer, or using an electric or microwave oven.[289]

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[281] Minn. Stat. § 216E.03, subd. 7(b)(1); Minn. R. 7850.4100(B).

[282] Ex. 2 at p. 6-6 (Application).

[283] Ex. 2 at p. 6-4 (Application).

[284] *Id*.

[285] Ex. 2 at p. 6-4 (Application).

[286] Minn. Stat. § 216E.03, subd. 7.

[287] Ex. 106 at p. 3 (Rasmussen Direct).

[288] Ex. 108 at Schedule 2 at p. 2 (Valberg Direct).

[289] Ex. 2 at p. 3-13 (Application); Ex. 108 at Schedule 2 at p. 2 (Valberg Direct).

189. Electric and magnetic fields also exist near wherever electricity is being generated and transmitted.[290]

190. The amount of electric charge on a metal wire, which is expressed as voltage, creates an electric field on other nearby charges.[291]

191. When electric charges in the conductor are in motion, they produce an electric current, which is measured in amperes, and a wire with an electric current creates a magnetic field ("MF") that exerts forces on other electric currents.[292] MF levels become lower farther away from the source.[293]

192. The electric and magnetic fields associated with power lines are often designated as extremely-low-frequency EMF ("ELF-EMF").[294]

193. ELF-EMF are distinct from the high-frequency electric and magnetic fields associated with radio, television, and cell-phone signals.[295] Radio and television electric and magnetic fields are meant to propagate away from an antenna and as a result carry radiofrequency energy ("RF") to the receiver.[296] The EMF from power lines is too low in frequency to carry energy away, and the electric energy stays on the power lines.[297] Therefore, ELF-EMF should not be called "radiation" or "emission" or confused with "ionizing radiation" such as X-rays.[298]

194. While there is no federal standard for transmission line electric fields, the Commission has imposed a maximum electric field limit of 8 kV/meter measured at one meter above the ground.[299]

195. The maximum electric field associated with Applicants' proposal, measured at one meter above the ground, is calculated to be 3.73 kV/m.[300]

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[290] Ex. 108 at Schedule 2 at p. 1 (Valberg Direct).

[291] *Id*.

[292] Ex. 108 at Schedule 2 at pp. 1-2 (Valberg Direct).

[293] Ex. 108 at Schedule 2 at p. 2 (Valberg Direct); Carpenter Vol. 2B at p. 65.

[294] Ex. 108 at Schedule 2 at p. 1 (Valberg Direct).

[295] Ex. 108 at Schedule 2 at p. 2 (Valberg Direct).

[296] Ex. 108 at Schedule 2 at pp. 2-3 (Valberg Direct).

[297] Ex. 108 at Schedule 2 at p. 3 (Valberg Direct).

[298] Ex. 108 at Schedule 2 at p. 3 (Valberg Direct).

[299] *See In the Matter of the Petitions of Northern States Power Company d/b/a Xcel Energy and Dairyland Cooperative for Permits to Construct a 115 kV and 161 kV Transmission Line from Taylors Falls to Chisago County Substation*, Docket No. E-002/TL-06-1677, Environmental Assessment at p. 45 (Aug. 20, 2007); Ex. 23 at p. 6-5 (DEIS).

[300] Ex. 2 at pp. 3-13, 3-14 (Application).

196. There is no federal standard for transmission line magnetic fields.[301] Presently, Minnesota also does not have any regulations regarding transmission line magnetic fields.[302] Other states that do have standards, such as Florida, Massachusetts, and New York, have established MF limits of 200 milligauss (mG) (for transmission lines 230-500 kV), 85 mG, and 200 mG, respectively, measured from the edge of transmission line rights-of-way.[303]

197. These established MF limits are far above the highest projected MF level of 42.28 mG at the edge of the right-of-way during peak operation that will be created by the Project.[304]

198. Applicants proffered an expert witness, Dr. Peter A. Valberg, to provide testimony on public health policy and the state of scientific research on whether exposure to ELF-EMF causes health effects.[305]

199. Dr. Valberg's background includes physics, physiology, and public health expertise. He holds graduate degrees both in physics and human physiology, and he has served on university faculties in both physics and public health.[306] Dr. Valberg is the author of more than 80 peer-reviewed articles on environmental health and cell biology. He advises researchers in the physical phenomena associated with RF EMF, including its impacts on human biology, and epidemiology.[307] Dr. Valberg has directed health risk assessments for municipal health departments, utilities, regulatory agencies, and industry on evaluation of potential health effects from exposure to EMF and RF.[308]

200. Dr. Valberg is of the opinion that there is scientific agreement on the issue of whether electric fields from power-lines cause health effects: "studies of electric fields have not suggested any links to health, and the reviews of public health agencies (e.g., the World Health Organization) have not identified health risk concerns relating to power-line electric field."[309]

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[301] Ex. 108 at Schedule 2 at p. 16 (Valberg Direct).

[302] Ex. 23 at p. 6-6 (DEIS).

[303] Ex. 108 at Schedule 2 at p. 17 (Valberg Direct).

[304] Ex. 2 at p. 3-21 (Application).

[305] Ex. 108 (Valberg Direct); Ex. 109 (Valberg Rebuttal).

[306] Ex. 108 at pp. 1-4 (Valberg Direct).

[307] Ex. 108 at Schedule 1 (Valberg Direct).

[308] *Id*.

[309] Ex. 108 at p. 5 (Valberg Direct); Ex. 108 at Schedule 2 at p. 2 (Valberg Direct).

201. Regarding MF, Dr. Valberg observed that "EMF health-effects research was triggered initially by an association reported between an index of power-line MF and statistics on whether or not a child had leukemia."[310]

202. The study by Nancy Wertheimer and Ed Leeper, published in a 1979 issue of the *American Journal of Epidemiology*, started the research and interest in the associations between ELF-MF and various health outcomes.[311]

203. This initial study was an epidemiological study. Epidemiological studies look for "associations," which means checking to see whether the frequency of occurrence of two events are correlated.[312] Epidemiological studies are inherently limited by issues of confounding, measurement error and selection bias. These inherent limitations restrict the value of epidemiological studies and require scientists and researchers to confirm the associations suggested by epidemiological studies with toxicological testing and supportive experimental results.[313]

204. In light of the suggestive associations made by a few epidemiological studies, laboratory experiments were undertaken to determine "whether or not laboratory evidence does or does not support a MF health risk."[314]

205. Over the more than 30 years since the first study, however, Dr. Valberg noted that "epidemiology has not yielded more definitive links to MF exposure" even as the studies improved in design and included larger populations of subjects.[315]

206. Dr. Valberg noted that scientists have not been able to establish a laboratory or other model that reliably demonstrates adverse biological changes in response to typical electric-power MF fields.[316] In fact, "[a] large number of studies with laboratory animals exposed, over their lifetimes, to MF levels a thousand-fold higher than near power lines yielded 'no effect'…."[317] Furthermore, "laboratory research with isolated cells and biophysical analyses have not identified plausible mechanisms by which MF at levels encountered near transmission lines…can lead to the creation or stimulation of tumor cells."[318]

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[310] Ex. 108 at Schedule 2 at p. 4 (Valberg Direct).

[311] Carpenter Vol. 2B at p. 76.

[312] Ex. 108 at Schedule 2 at p. 4 (Valberg Direct).

[313] Ex. 109 at pp. 9-10 (Valberg Rebuttal).

[314] Ex. 108 at Schedule 2 at p. 4 (Valberg Direct).

[315] *Id*.

[316] Ex. 108 at p. 5 (Valberg Direct). Ex 108 at Schedule 2 at p. 5 (Valberg Direct).

[317] Ex. 108 at Schedule 2 at p. 4 (Valberg Direct).

[318] *Id*.

207. Dr. Valberg concluded that power line MF is an "implausible source of human health risk."[319]

208. Dr. Valberg's conclusions are consistent with the EMF research conducted by reputable international and national health academics.[320] Dr. Valberg's conclusions are also consistent with the Minnesota Interagency Working Group "White Paper on Electric and Magnetic Field (EMF) Policy and Mitigation Options" published in 2002 by the Minnesota Department of Health.[321] This white paper found that "Most researchers [have] concluded that there is insufficient evidence to prove an association between EMF and health effects . . . ."[322]

209. Other than Dr. Valberg, the only witness to provide testimony on EMF during the contested case hearing was the Johnsons' witness Dr. David Carpenter.[323]

210. Dr. Carpenter contended that exposures to EMF of greater than 4 mG was a risk factor for childhood leukemia and greater than 2 mG for amyotrophic lateral sclerosis (ALS), and Alzheimer's disease.[324] The information relied upon for these conclusions was derived from a variety of studies, including metastudies, none of which established a causal relationship between EMF-ELF exposure levels and any disease. Further, Dr. Carpenter noted "that exposure to other household sources of magnetic fields also elevate the risk of childhood leukemia." [325] Dr. Carpenter also noted that "the evidence of risk [of health concerns posed by magnetic fields of 2 mG or greater] is not conclusive." [326] The lack of a conclusive connection between EMF-ELF exposure and any particular disease is borne out by the studies assessing the impact of occupational exposure on disease discussed by Dr. Carpenter. Varying results were obtained when studying the health history of workers in occupations requiring frequent exposure to high levels of EMF-ELF.[327] There is no animal study model that demonstrates the development of cancer in response to exposure to EMFs.[328]

211. A number of commentators cited studies that claimed associations exist between ELF-EMF exposure and childhood leukemia, amyotrophic lateral sclerosis (ALS), and Alzheimer's disease. These studies relied upon the concept of the

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[319] Ex. 108 at p. 6 (Valberg Direct).

[320] Ex. 108 at Schedule 2 at pp. 19-23 (Valberg Direct).

[321] Ex. 147 (White Paper on EMF).

[322] *Id.*

[323] Ex. 200 (Carpenter Direct).

[324] Ex. 200 at p. 4 (Carpenter Direct).

[325] Ex. 200 at p. 10 (Carpenter Direct).

[326] Ex. 200 at p. 11 (Carpenter Direct).

[327] Ex. 200 at p. 11 (Carpenter Direct).

[328] Ex. 200 at p. 14 (Carpenter Direct); Applicants Reply, at 23-24.

Precautionary Principle to support assertions that ELF/EMF standards are underprotective in the face of the uncertainties of current science. The documented response to very low-level ELF and RF exposures was the observed production of "stress proteins" by cells. This observation is inferred to mean that "the cell recognizes ELF and RF exposures as harmful."[329] There is no description of any mechanism of causation between this protein production and any of the conditions claimed as associateid with ELF-EMF exposure. [330]

212. The Applicants pointed out that "Several of the studies relate to research on ELF-MF exposures many orders of magnitude higher than the highest peak field calculated for the Project."[331] The exceptionally high levels of exposure to EMF-ELF support the conclusion that the studies relied upon by Dr. Carpenter are not probative to assessing the impact of the Project's HVTL on the health and safety of persons living in the vicintiy of the route.

213. The DEIS contains significant discussion of the issues of EMF-ELF exposure and a related issue, stray voltage. Regarding the impact of electric fields, the DEIS states:

> For the proposed Project the highest calculated electric fields at 100 and 200 feet from transmission centerline would be 0.35 kV/m and 0.12 kV/m, respectively, with the lowest overall field strength of 0.02 kV/m at 300 feet from centerline. These electric field strengths are well within the range of electric fields generated by other common household and business sources. No adverse effects from electric fields on health are expected for persons living or working at locations along or near the proposed Project.[332]

214. As for magnetic fields, the DEIS states:

> The results of the various studies conducted over the last three decades, specifically those regarding the relationship between EMF and childhood leukemia and other cancer risks, have been mixed; some have found an association while others have not.
>
> Where there is association suggested in epidemiological studies, it is usually very near the statistical threshold of significance. However, when these studies are repeated in a laboratory, the results have not reproduced or identified a biological mechanism to support a link between

[329] Jeffrey Otto Comment, January 12, 2010 (Doc. Id. 20101-46263-03)(quoting *BioInitiative Report: A Rationale for a Biologically-based Public Exposure Standard for Electromagnetic Fields (ELF and RF)*, at 17 (co-edited by Dr. Carpenter); Ex. 200 at p. 16 (Carpenter Direct). .

[330] Johnson Reply Brief, at 1-2.

[331] Applicants' Reply Brief, at 20-21.

[332] Ex. 23, DEIS Section 6.2, at 6-4 (Doc. Id. 200910-43110-09).

> childhood leukemia and magnetic fields. The replication of field results in a laboratory setting is a basic test of scientific validity. Researchers continue to look at magnetic fields until more certain conclusion can be reached.[333]

215. The DEIS suggests that EMF-ELF impacts, to whatever extent such impacts exist, can be mitigated through distance from the HVTL, compaction between transmission line phases, and phase cancellation along the HVTL.[334]

216. The absence of any demonstrated impact by EMF-ELF exposure supports the conclusion that there is no demonstrated impact on human health and safety that is not adequately addressed by the existing State standards for such exposure. The record shows that the current exposure standard for EMF-ELF is adequately protective of human health and safety.

217. Linda Brown, John H. Sullivan and Jan Campe, Secretary of the Le Sueur Saddle Club, expressed concern over the impact of stray voltage on animals.[335] The DEIS describes stray voltage as "a grounding issue that can occur on the electric service entrances to structures from distribution lines—not transmission lines." Based on the experiences arising through the interaction of dairy cattle and electricity, the DEIS proposed resolution of any such issues in the context of this HVTL route proceeding as follows:

> Transmission lines do not, by themselves, create stray voltage because they do not connect to businesses or residences. However, transmission lines can induce stray voltage on a distribution circuit that is parallel to and immediately under the transmission line. Proper design and pole placement can reduce or eliminate stray voltage effects from the transmission lines. The applicants would be required to remedy any stray voltage issues as a condition of a route permit.[336]

218. Stray voltage that is induced by the proposed HVTL is appropriately remedied by the Applicants. Imposition of a condition by the Commission such as that noted above is supported by the record.

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[333] Ex. 23, DEIS Section 6.2, at 6-8 (Doc. Id. 200910-43110-09).

[334] *Id*.

[335] Sullivan Comment, January 14, 2010 (Doc. Id. 20101-46263-02); Campe Comment, January 12, 2010 (Doc. Id. 20101-46263-02).

[336] Ex. 23, DEIS Section 6.2.2, at 6-9 (Doc. Id. 200910-43110-09).

C. Effects on Land Based Economies

219. Minnesota high voltage transmission line routing criteria require consideration of the proposed route's impacts to land based economies, specifically agriculture, forestry, tourism, and mining.[337]

220. The Project will result in permanent and temporary impacts to farmland.[338] Permanent impacts will occur as a result of structure placement along the route centerline. Applicants estimated that the permanent impacts in agricultural fields will be 1,000 square feet per pole.[339] Temporary impacts, such as soil compaction and crop damage, are likely to occur during construction.[340] Applicants estimated temporary impacts in agricultural fields to be one acre per pole for construction.[341]

221. There is no evidence in the record indicating that there will be impacts to economically important forestry resources.[342]

222. There are tourism activities located within the Modified Preferred Route, Alternate Route, and Crossover Route along with resources within the vicinity that may be indirectly impacted by the Project because of view shed or alteration of the landscape.[343]

223. The majority of tourism opportunities are associated with the recreational resources described above.[344]

224. Applicants have committed to minimizing, to the greatest extent feasible, direct impacts to recreational resources.[345]

225. There is no evidence in the record indicating that the presence of this Modified Preferred Route, Alternate Route, or Crossover Route will impact tourism.[346]

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[337] Minn. Stat. § 216E.03, subd. 7(b)(5); Minn. R. 7850.4100(C).

[338] Ex. 2 at p. 6-44 (Application).

[339] Ex. 2 at p. 6-44 (Application).

[340] *Id*.

[341] *Id*.

[342] Ex. 2 at pp. 6-46, 8-25 (Application).

[343] Ex. 2 at p. 6-46 (Application).

[344] *Id*.

[345] Ex. 2 at p. 6-27 (Application).

[346] Ex. 2 at pp. 6-46, 8-25 (Application).

226. Mining resources have been identified along the Modified Preferred Route, the Alternate Route, and the Crossover Route.[347]

227. There are three mines within the Modified Preferred Route and one area utilized for kaolin clay extraction.[348] Additionally, there are future plans in Eureka Township and along the Minnesota and Redwood River valleys for mining.[349]

228. There are six mines within the Alternate Route. Additionally, a karst formation was identified near Chub Lake WMA.[350]

229. The record demonstrates that the Modified Preferred Route, and that Route with Alternative 6P-06 incorporated, will have less of an impact to land-based economies than the Alternate Route and the Crossover Route.

D. Effects on Archaeological and Historic Resources

230. Minnesota high voltage transmission line routing criteria require consideration of the proposed route's effect on archaeological and historic resources.[351]

231. Archaeological and historic resources are those places that represent the visible or otherwise tangible record of human occupation.[352] When identifying the archaeological and historic resources along the proposed routes, Applicants included "[i]dentified locations that have special meaning for specific communities along the Project."[353]

232. There are 68 archaeological sites within one mile of the Modified Preferred Route; 26 acres of aquatic environments crossed by the right-of-way of the Modified Preferred Route; eight National Register of Historic Places ("NRHP") designated properties within one mile of the Modified Preferred Route; and 212 historical sites within one mile of the Modified Preferred Route.[354]

233. There are 110 archaeological sites within one mile of the Alternate Route; 44 acres of aquatic environments crossed by the Alternate Route's rights-of-way; 13

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[347] Ex. 2 at p. 4-10 (Application); Ex. 102 at pp. 17-19, 57-59 (Poorker Direct); Ex. 140 at p. 7 (Poorker Supplemental).

[348] Ex. 2 at p. 6-48 (Application); Ex. 102 at Schedule 3 (Poorker Direct).

[349] Ex. 102 at pp. 17-19 (Poorker Direct).

[350] Ex. 2 at pp. 4-11, 8-26 (Application).

[351] Minn. Stat. § 216E.03, subd. 7(b)(1); Minn. R. 7850.4100(D).

[352] Ex. 2 at p. 6-48 (Application).

[353] *Id*.

[354] Ex. 2 at pp. 6-50-53; Ex. 102 at Schedule 3; Ex. 102 at pp. 17-19 (Poorker Direct).

NRHP properties within one mile of the Alternate Route; and 199 architectural resources within one mile of the Alternate Route.[355]

234. There are 70 archaeological sites within one mile of the Crossover Route; 233 acres of wetlands crossed by the Crossover Route; and 202 historical sites within one mile of the Crossover Route.[356]

235. Applicants propose to mitigate impacts to locations that are or might be NRHP designated sites by utilizing best management practices developed in coordination with the OES and SHPO. If avoidance or impact minimization are not feasible given the Project engineering requirements, Applicants will develop, in coordination with OES and SHPO, compensatory measures for the losses of those properties. In addition to working with OES and SHPO, Applicants will also work with Native American tribes and other State and federal permitting or land management agencies to assist in the development of avoidance, minimization or treatment measures.[357]

236. The record demonstrates that there are fewer archaeological and historic sites within the Modified Preferred Route, and on that Route if Alternative 6P-06 is incorporated, than within either the Alternate Route or the Crossover Route.

E. <u>Effects on Natural Environment</u>

237. Minnesota high voltage transmission line routing criteria require consideration of the proposed route's effect on the natural environment, including effects on air and water quality resources and flora and fauna.[358]

1. Air Quality

238. Construction of the Project will result in temporary air quality impacts caused by, among other things, construction-vehicle emissions and fugitive dust from right-of-way clearing.[359]

239. Applicants will implement the appropriate dust control measures.[360]

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[355] Ex. 2 at § 8.4 (Application).

[356] Applicants January 19, 2010 Letter at Route Impact Table, filed 01/19/10, Doc. Id. 20101-46155-01.

[357] Ex. 2 at p. 6-53 (Application).

[358] Minn. Stat. §§ 216E.03, subd. 7(b)(1) and (2); Minn. R. 7850.4100(E).

[359] Ex. 2 at p. 6-54 (Application).

[360] *Id*.

240. The operation of the Project along either the Modified Preferred Route (with or without adoption of Alternative 6P-06), Alternate Route, or Crossover Route is not anticipated to cause any long-term impacts to air quality.[361]

2. Water Quality and Resources

241. The Project crosses two major hydrologic units ("HUs") within the Upper Mississippi Drainage Region.[362]

242. Several rivers, including the Minnesota River, streams, and ditches will be crossed by the Project or will be within the right-of-way of the Project.[363]

243. Applicants will not place any structures within these features and do not anticipate any direct impacts to these features.[364] Indirect impacts are expected and will be avoided and minimized using the appropriate construction practices.[365]

244. Because wetland impacts will be minimized and mitigated, disturbed soil will be restored to previous conditions or better, and the amount of land area converted to an impervious surface will be small, there will be no significant impact on surface water quality once the Project is completed.[366]

245. Wetlands and floodplains will be crossed by the Project or will be situated within the right-of-way of the Project.[367]

246. Applicants will avoid major disturbance of individual wetlands and drainage systems during construction.[368] This will be done by spanning wetlands and drainage systems, where possible.[369] When it is not possible to span such areas, Applicants have proposed other options that will minimize impacts.[370]

247. Permanent impacts to wetlands would take place where structures must be located within wetland boundaries.[371]

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[361] *Id*.

[362] *Id*.

[363] Ex. 2 at pp. 6-54-55 (Application).

[364] Ex. 2 at pp. 6-54-55 (Application).

[365] Ex. 2 at p. 6-59 (Application).

[366] *Id*.

[367] *Id*.

[368] *Id*.

[369] *Id*.

[370] *Id*.

[371] Ex. 2 at p. 6-60 (Application).

248. The Modified Preferred Route will permanently impact 440 square feet of wetlands, temporarily impact 13.4 acres of wetlands, permanently impact approximately seven acres of forested wetland, cross 160 streams, and permanently impact 0.05 acres of floodplains.[372]

249. The Alternate Route will permanently impact 1,045 square feet of wetlands, temporarily impact 17.5 acres of wetlands, permanently impact 11 acres of forested wetlands, cross 190 streams, and permanently impact 0.08 acres of floodplains.[373]

250. The Crossover Route will cross 233 wetlands, 29 forested wetlands and 168 streams. The Crossover Route will temporarily impact 15.8 acres of wetlands.[374]

251. The record demonstrates that there are fewer water resources within the Modified Preferred Route (and even fewer still if Alternative 6P-06 is adopted), than within either the Alternate Route or the Crossover Route.

3. Flora

252. The Project crosses two Environmental Classification System ("ECS") units: the Prairie Parkland ecoregion in the western half of the Project area and the Eastern Deciduous Forest in the eastern portion of the Project area.[375]

253. Throughout the Project area, there are several areas where native vegetation occurs naturally or is managed.[376] Designated habitat or conservation areas include managed lands such as DNR WMAs and USFWS WPAs and easements, and unmanaged areas, including DNR-designated Minnesota County Biological Survey ("MCBS") areas of biodiversity significance and rare native habitats and communities.[377]

254. Applicants will work to minimize long-term impacts to flora by spanning areas containing native species wherever possible.[378] When native vegetation communities cannot feasibly be spanned, Applicants will minimize the number of structures within these lands.[379]

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[372] Ex. 2 at pp. 6-55-56 (Application); Ex. 102 at Schedule 3; Ex. 102 at pp. 17-19 (Poorker Direct).

[373] Ex. 2 at p. 8-33 (Application).

[374] Applicants January 19, 2010 Letter at Route Impact Table, filed 01/19/10, Doc. Id. 20101-46155-01.

[375] Ex. 2 at p. 6-60 (Application).

[376] Ex. 2 at p. 6-61 (Application).

[377] *Id*.

[378] Ex. 2 at p. 6-66 (Application).

[379] *Id*.

255. Areas disturbed due to construction activities will be restored to pre-construction contours. These areas will be reseeded with a seed mix recommended by the local DNR management and that is certified to be free of noxious weeds.[380]

256. The Modified Preferred Route will result in the permanent removal of 275 square feet of WMA land, permanent impacts to 55 square feet of an USFWS easement, and a total of 17 MCBS sites being crossed.[381]

257. The Alternate Route will result in the permanent removal of 440 square feet of WMA land, permanent impacts to 55 square feet of an USFWS easement, and a total of 23 MCBS sites being crossed.[382]

258. The Crossover Route will affect flora in that the route, will cross 16 MCBS Biodiversity sites, be within one mile of nine USFWS properties and easements, and will result in the permanent removal of 275 square feet of WMA land.[383]

259. The record demonstrates that there is less impact upon flora within the Modified Preferred Route, with or without Adoption of Alternative 6P-06, than within the Alternate Route or the Crossover Route.

4. Fauna

260. Wildlife throughout the Project area consists of birds, mammals, fish, reptiles, amphibians, mussels, and insects, both resident and migratory, which use the area for forage, shelter, breeding, or stopover during migration.[384]

261. Throughout the Project area, there are several areas where high-quality wildlife habitat occurs naturally or is being managed.[385]

262. The Minnesota River Valley is recognized as a major flyway for migrating birds; more than 200 species of birds have been recorded in the valley.[386]

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[380] Ex. 2 at p. 6-66 (Application).

[381] Ex. 2 at 6-66 (Application); Ex. 102 at Schedule 3 (Poorker Direct); Ex. 102 at pp. 17-19 (Poorker Direct).

[382] Ex. 2 at p. 8-35 (Application).

[383] Applicants' January 19, 2010 Letter at Route Impact Table, filed 01/19/10, Doc. Id. 20101-46155-01.

[384] Ex. 2 at p. 6-67 (Application).

[385] Ex. 2 at p. 6-67 (Application).

[386] *Id*.

263. There is potential for the displacement of wildlife and loss of habitat from construction of the Project. Wildlife could be impacted in the short-term within the immediate area of construction.[387]

264. Permanent impacts to wildlife could take place at substation locations.[388]

265. Raptors, waterfowl, and other bird species may be affected by the construction and placement of transmission lines.[389]

266. To mitigate possible impacts to wildlife, Applicants will span designated habitat or conservation areas wherever feasible. In areas where complete spanning is not possible, Applicants will minimize the number of structures placed in high quality wildlife habitat and will work with the MnDNR and USFWS to determine appropriate mitigation.[390]

267. The Modified Preferred Route crosses important bird areas at the Minnesota River Crossings, and the Grassland Bird Conservation Areas for a span of 22 miles.[391]

268. The Alternate Route crosses important bird areas at all three Minnesota River crossings, and the Grassland Bird Conservation Areas for 30 miles.[392]

269. The Crossover Route will have a similar impact to fauna as the Alternate Route.[393]

270. The evidence demonstrates that neither the Modified Preferred Route, the Modifed Preferred Route with Alternative 6P-06 incorporated, the Alternate Route, nor the Crossover Route will have significant impacts on fauna.

F. <u>Effects on Rare and Unique Natural Resources</u>

271. Minnesota high voltage transmission line routing criteria require consideration of the proposed route's effect on rare and unique natural resources.[394]

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[387] Ex. 2 at p. 6-70 (Application).

[388] Ex. 2 at p. 6-71 (Application).

[389] *Id*.

[390] Ex. 2 at pp. 6-71-72 (Application).

[391] Ex. 102 at Schedule 3 (Poorker Direct); Ex. 102 at pp. 17-19 (Poorker Direct).

[392] Ex. 2 at p. 4-12 (Application).

[393] Ex. 103 at p. 4-7 (Poorker Rebuttal); Ex. 140 at p. 7 (Poorker Supplemental)

[394] Minn. Stat. § 216E.03, subd. 7(b)(1); Minn. R. 7850.4100(F).

272. Threatened and endangered species are often found within high quality rare and unique habitats and features.[395]

273. Many of the threatened and endangered species identified in the Project area are associated with remnants of prairie land, which were once abundant in this area of Minnesota. River species of fish and mussels are encountered in major rivers, particularly the Minnesota River. Species associated with rock outcrops and with wetlands are also found in the Project area.[396]

274. Applicants will span, where possible, rivers, streams and wetlands, and any habitats where prairie remnants and rock outcrops have been recorded or are likely to occur. Wherever it is not feasible to span, a survey will be conducted to determine the presence of special status species or suitability of habitat for such species. Where the survey shows such species or habitat, Applicants will coordinate with the appropriate agencies to avoid and minimize any impact.[397]

275. A total of 14 records of threatened and endangered species were recorded within one mile of the Modified Preferred Route; and one MCBS outstanding significance area was identified.[398]

276. A total of 20 records of threatened and endangered species were recorded within one mile of the Alternate Route; and one MCBS outstanding significance area was identified.[399]

277. A total of 72 records of threatened and endangered species were recorded within one mile of the Crossover Route; and 16 MCBS sites will be crossed by the Crossover Route.[400]

278. The record demonstrates that there are fewer threatened and endangered species within the Modified Preferred Route, whether or not Alternative 6P-06 is incorporated, than within the Alternate Route or the Crossover Route. The record also demonstrates that the Modified Preferred Route, or that Route modified by Alternative 6P-06, and Alternate Route would affect only one MCBS site compared to 16 for the Crossover Route.

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[395] Ex. 2 at p. 6-72 (Application).

[396] *Id.*.

[397] Ex. 2 at pp. 6-74-75 (Application).

[398] Ex. 2 at p. 6-74 (Application); Ex. 102 at Schedule 3 (Poorker Direct); Ex. 102 at pp. 17-19 (Poorker Direct).

[399] Ex. 102 at pp. 17-19 (Poorker Direct).

[400] Applicants' January 19, 2010 Letter at Route Impact Table, filed 01/19/10, Doc. Id. 20101-46155-01.

G. Application of Various Design Considerations

279. Minnesota high voltage transmission line routing criteria require consideration of applied design options for the Project that maximize energy efficiencies, mitigate adverse environmental effects, and accommodate potential expansion of transmission or generating capacity.[401]

280. Approximately 123 to 136 miles of the 345 kV transmission line will be constructed with double circuit capable poles so that a second circuit can be strung when conditions justify expansion. This will allow for maximizing the use of existing right-of-way and minimizing the construction time for a new circuit when circumstances merit expansion.[402]

281. While the Modified Preferred Route, Alternate Route, and Crossover Route are designed to accommodate the addition of a future circuit, the Modified Preferred Route will require addition of future circuits along fewer miles of line.[403]

282. For the proposed new substation sites, Applicants will acquire approximately 40 acres to allow for future transmission line interconnections.[404]

283. The new substations planned for the Project are designed to accommodate facility additions in the future.[405]

284. The design options of the facilities along the Modified Preferred Route, and along that Route as modified by Alternative 6P-06, along the Alternate Route, and along the Crossover Route maximize energy efficiencies, mitigate adverse environmental effects, and accommodate future expansion.[406]

H. Use or Paralleling of Existing Right-of-Way, Survey Lines, Natural Division Lines and Agricultural Field Boundaries

285. Minnesota high voltage transmission line routing criteria require consideration of the proposed route's use or paralleling of existing rights-of-way, survey lines, natural division lines, and agricultural field boundaries.[407]

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[401] Minn. Stat. §§ 216E.03, subd. 7(b)(3) and (10); Minn. R. 7850.4100(G).

[402] Ex. 2 at p. 3-5 (Application).

[403] Ex. 2 at pp. 3-5, 4-12 (Application); Ex. 102 at pp. 17-19 (Poorker Direct).

[404] Ex. 2 at p. 3-6 (Application).

[405] *Id*.

[406] Ex. 2 at pp. 3-5, 3-6 (Application).

[407] Minn. Stat. § 216E.03, subd. 7(b)(9); Minn. R. 7850.4100(H).

286. Approximately 93.4% of the Modified Preferred Route uses or parallels existing right-of-way, survey lines, natural division lines, or agricultural field lines.[408]

287. Approximately 93.5% of the Alternate Route uses or parallels existing right-of-way, survey lines, natural division lines, or agricultural field lines.[409]

288. Approximately 93.6% of the Crossover Route uses or parallels existing right-of-way, survey lines, natural division lines, or agricultural field lines.[410]

289. Several agricultual landowners have raised objections to portions of the routes that propose to cross agricultural fields and not follow the boundary lines. These commentators raised concerns that active HVTLs create interference with global positioning system equipment (GPS).[411] They also expressed concern about the impact of HVTLs on overhead irrigation systems. Several commentators noted that they have tile drainage systems that could be impaired by moving heavy equipment over these fields.

290. The record supports those crossings, often to avoid impacts to residences that would arise from following the boundary lines. There has not been a showing that GPS systems would be sufficiently impaired to result in signifcant harm to these agricultural landowners. These landowners have raised valid concerns regarding the potential impact of construction on existing drain tile and the presence of HVTL near operating irrigation systems. Much of this concern is addressed in the terms of the AIMP. The record supports the Commission adding requirements to the route permit that the Applicant must ensure that drain tile is not impaired through construction and maintenance of the HVTLs. The record supports the Commission adding requirements to the route permit to ensure that existing irrigation systems can coexist with the HVTL crossing agricultural land, or compensate the landowner for any modifications reasonably required to allow for irrigation of a field crossed by the HVTL.

291. The record demonstrates that the Modified Preferred Route (whether or not that Route is modified by Alternative 6P-06), Alternate Route, and Crossover Route nearly equally use or parallel existing rights-of-way, survey lines, natural division lines, and agricultural field boundaries.

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[408] Ex. 2 at § 3.2 (Application); Ex. 102 at pp. 17-19 (Poorker Direct).

[409] Ex. 2 at § 3.2 (Application).

[410] Applicants January 19, 2010 Letter at Route Impact Table, filed 01/19/10, Doc. Id. 20101-46155-01

[411] Swedzinski Comment January 8, 2010.

I. Use of Existing Transportation, Pipeline, and Electrical Transmission System Right-of-Way

292. Minnesota high voltage transmission line routing criteria require consideration of the proposed route's use of existing transportation, pipeline and electrical transmission system rights-of-way.[412]

293. Applicants provided a general explanation regarding co-location of new transmission lines with distribution lines. Applicants' witness Mr. Poorker explained that "we cannot put it on the same pole" because the new transmission lines require longer span lengths compared to existing distribution lines.[413] Applicants will work with local distribution utilities to offer alternatives, such as carrying the distribution line if it is a single phase (i.e., one line) or undergrounding distribution lines, where appropriate.[414]

294. There are generally few locations where the proposed routes follow existing transmission lines. Each potential co-location requires a case-by-case analysis. Applicants pledged to further analyze co-location opportunities after the route is determined.

295. Applicants also analyzed possibilities for co-locating the Project at the Minnesota River crossings.

296. There are five proposed crossing locations of the Minnesota River: 1) Granite Falls, which is common to the Modified Preferred Route and Alternate Route; 2) North Redwood, which will be used only for the Alternate Route; 3) Redwood Falls, Brown County, which will be used only for the Modified Preferred Route; 4) Belle Plaine, which will be used only for the Alternate/Crossover Route; and 5) Le Sueur, which will be used only for the Modified Preferred Route.

297. For the Minnesota River crossing at Granite Falls, Applicants propose to replace the existing Lyon County – Minnesota Valley 115 kV line, which currently crosses the Minnesota River at Granite Falls, with the new 345 kV facilities.[415] The new 345 kV facilities would be constructed generally along the same alignment.[416] Applicants anticipate that there will be some areas where the alignment may be adjusted to minimize impacts to homes.[417]

298. For the Minnesota River crossing at North Redwood, Applicants propose to parallel the existing 115 kV transmission line. Applicants propose to use H-frame

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[412] Minn. Stat. § 216E.03, subd. 7(b)(8); Minn. R. 7850.4100(J).

[413] Winthrop Dec. 3, 2009 7:00 p.m. at p. 26-30.

[414] Winthrop Dec. 3, 2009 7:00 p.m. at p. 26-30; Poorker Vol. 1B at p. 80.

[415] Ex. 2 at I-3 (Application).

[416] Ex. 23 at pp. 7-47 (DEIS); Ex. 2 at I-56 (Application).

[417] Ex. 2 at Appendix I, Figure 1B (Application).

structures adjacent to the existing 115 kV easement and share right-of-way to the extent possible to reduce amount of new right-of-way required.

299. For the Minnesota River crossing at Redwood Falls, Brown County, Applicants did not propose to co-locate the Project because there are no other transmission facilities in that area. The Modified Preferred route will follow a road/bridge corridor across the Minnesota River at that location.

300. For the Minnesota River crossing at Belle Plaine, Applicants evaluated three feasible options for crossing at this location, including one co-location alternative.[418] The co-location option would use steel H-frame multiple circuit structures that would include the existing 69 kV transmission line with a distribution underbuild.[419] The second option is to use double circuit H-frame structures adjacent to the existing 69 kV right-of-way.[420] The third option is a side-by-side H-frame alternative, developed in response to a request by the USFWS to identify the configuration that would keep the conductors as flat (low) as possible at this crossing.[421] This option would place a single circuit 345 kV line on each H-frame and be located adjacent to the existing 69 kV line. Applicants did not advocate for a specific design due to the concerns expressed by USFWS.[422]

301. For the Minnesota River crossing at Le Sueur, Applicants analyzed co-locating the new 345 kV transmission line on the U.S. Highway 169 bridge and constructing a self-supporting pier and attaching the new 345 kV transmission line to the pier. Applicants concluded both co-location opportunities are infeasible for a myriad of reasons.[423] Applicants continue to propose using a new double-circuit H-frame structure to aerially cross the Minnesota River at this location.[424]

302. Approximately 76.2% of the Modified Preferred Route follows existing transportation, pipeline, and electrical transmission system rights-of-way.[425]

303. Approximately 70.0% of the Alternate Route follows existing transportation, pipeline and electrical transmission system rights-of-way.[426]

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[418] Ex. 141 at p. 7 (Lennon Supplemental); Ex. 140 at p. 5 (Poorker Supplemental).

[419] Ex. 2 at p. 3-1 (Application); Ex. 104 at pp. 5-6 (Lennon Direct).

[420] Ex. 141 at p. 7 (Lennon Supplemental).

[421] Lennon Vol. 4at p. 144.

[422] *See e.g.*, USFWS February 8, 2010 Letter at pp. 1-2 fled 02/08/10, e-docket document 20102-46903-01.

[423] Applicants' Initial Post-Hearing Brief at pp. 61-63.

[424] Ex. 140 at p. 6 (Poorker Supplemental).

[425] Ex. 2 at § 3.2 (Application); Ex. 102 at Schedule 3 (Poorker Direct); Ex. 102 at pp. 16-19 (Poorker Direct).

[426] Ex. 2 at § 3.2 (Application).

304. Approximately 74.3% of the Crossover Route follows existing transportation, pipeline and electrical transmission system rights-of-way.[427]

305. The record demonstrates that the Modified Preferred Route, and that Route as modified by Alternative 6P-06, uses more existing transportation, pipeline, and electrical transmission system right-of-way than either the Alternate Route or Crossover Route.

J. Electrical System Reliability

306. Minnesota high voltage transmission line routing criteria require consideration of the Project's impact on electrical system reliability.[428]

307. The record demonstrates the Modified Preferred Route, whether or not modified further by Alternative 6P-06, Alternate Route, and Crossover Route will support the reliable operation of the transmission system.

K. Costs of Constructing, Operating, and Maintaining the Facility

308. Minnesota high voltage transmission line routing criteria require consideration of the each proposed route's cost of construction, operation and maintenance.[429]

309. The Modified Preferred Route and its Associated Facilities will cost $705 million ($2007) to construct and $300 to $500 per mile to operate and maintain.[430]

310. The Alternate Route and its Associated Facilities will cost $755 million ($2007) to construct and $300 to $500 per mile to operate and maintain.[431]

311. The Crossover Route and its Associated Facilities will cost $724 million ($2007) to construct and $300 to $500 per mile to operate and maintain.[432]

312. The record demonstrates that it will cost less to construct the Modified Preferred Route and its Associated Facilities than the Alternate Route and its Associated Facilities or the Crossover Route and its Associated Facilities.

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[427] Applicants January 19, 2010 Letter to ALJ at Route Impact Table, filed 01/19/10, Doc. Id. 20101-46155-01.

[428] Minn. Stat. § 216E.03, subd. 7(b)(10); Minn. R. 7850.4100(K).

[429] Minn. R. 7850.4100(L).

[430] Ex. 104 at p. 10 (Lennon Direct); Ex. 2 at § 2.6 (Application).

[431] Ex. 2 at § 2.6 (Application).

[432] Ex. 141 at p. 8 (Lennon Supplemental); Ex. 2 at § 2.6 (Application).

313. The record also demonstrates that the Modified Preferred Route is the least cost alternative.

L. Adverse Human and Natural Environmental Effects Which Cannot be Avoided

314. Minnesota high voltage transmission line routing criteria require consideration of the adverse human and natural environmental effects, which cannot be avoided, for each proposed route.[433]

315. Unavoidable adverse impacts include the physical impacts to the land, primarily agricultural land, due to the construction of the Project.[434]

316. Applicants have identified mitigation measures to address adverse environmental effects during construction of the Project.[435]

317. Applicants also will work with the public and public agencies to minimize the unavoidable adverse environmental effects that may arise during construction of the Project.[436]

318. Approximately 25.4 acres of permanent agricultural land impacts are anticipated for the Modified Preferred Route.[437]

319. Approximately 26.8 acres of permanent agricultural land impacts are anticipated for the Alternate Route.[438]

320. Approximately 540 acres of prime farmland may be crossed by the Crossover Route right-of-way.[439]

M. Irreversible and Irretrievable Commitments of Resources

321. Minnesota high voltage transmission line routing criteria require consideration of the irreversible and irretrievable commitments of resources that are necessary for each proposed route.[440]

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[433] Minn. Stat. § 216E.03, subd. 7(b)(5) and (6); Minn. R. 7850.4100(M).

[434] Ex. 2 at p. 4-13 (Application).

[435] Ex. 2 at § 6-9 (Application).

[436] *Id*.

[437] Ex. 2 at p. 4-13 (Application); Ex. 102 at pp. 16-19 (Poorker Direct).

[438] Ex. 2 at p. 4-13(Application); Ex. 2 at § 8.3 (Application).

[439] Applicants January 19, 2010 Letter at Route Impact Table, filed 01/19/10, Doc. Id. 20101-46155-01.

[440] Minn. Stat. § 216E.03, subd. 7(b)(11); Minn. R. 7850.4100(N).

322. Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects that the use of those resources have on future generations.[441] Irreversible effects result primarily from the use or destruction of a specific resource that cannot be replaced within a reasonable time frame.[442] Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored through later actions.[443]

323. There are few commitments of resources associated with this Project that are irreversible and irretrievable, but those few resources primarily relate to construction of the Project.[444]

324. Only construction resources, such as concrete, steel and hydrocarbon fuels, will be irreversibly and irretrievably committed to this Project.[445]

325. The commitment of these resources are similar for both of the Modified Preferred Routes, Alternate Route, and Crossover Route.[446]

326. The overall length of either Modified Preferred Route is less than the Alternate Route or Crossover Route. As a result, fewer poles will be needed for either Modified Preferred Route than for the Alternate Route and the Crossover Route.[447]

N. Consideration of Issues Presented by State and Federal Agencies

327. Minnesota high voltage transmission line routing criteria allows for the consideration of problems raised by state and federal agencies when appropriate.[448]

328. Mn/DOT, USFWS, and MnDNR expressed concern with various aspects of the Modified Preferred Route.[449]

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[441] Ex. 2 at p. 4-14 (Application).

[442] *Id*.

[443] *Id*.

[444] *Id*.

[445] *Id*.

[446] Ex. 2 at p. 4-14 (Application); Ex. 102 at pp. 16-19 (Poorker Direct); Ex. 104 at pp. 8-10 (Lennon Direct); Applicants January 19, 2010 Letter at Route Impact Table, filed 01/19/10, Doc. Id. 20101-46155-01.

[447] Ex. 2 at p. 4-14 (Application); Ex. 102 at p. 16-19 (Poorker Direct); Ex. 104 at pp. 8-10 (Lennon Direct).

[448] Minn. Stat. § 216E.03, subd. 7(b)(12).

[449] Ex. 102 at Schedule 20 at pp. 27-38 (Poorker Direct); Ex. 103 at pp. 14-16 (Poorker Rebuttal); Ex. 140 at pp. 3-11 and Schedules 42- 47 (Poorker Supplemental).

1. Mn/DOT

329. Mn/DOT stated concerns with the proposed route's impacts on Mn/DOT rights-of-way and expressed uncertainty whether Utility Permits could be issued for various portions of the Modified Preferred Route.[450]

330. Mn/DOT did not opine on whether Utility Permits would be issued in each instance where a permit would be required. Mn/DOT will perform such an analysis after it "evaluate[s] each pole location individually in relation to the topography of the land, the geometry of the roadway, the width of the highway right-of-way, the design of the HVTL structures, and other factors."[451]

331. Mn/DOT did provide substantive comments regarding whether a Utility Permit could be issued for 1) U.S. Highway 169 near the Minnesota River crossing at Le Sueur; 2) Minnesota Highway 52 south of the new Hampton substation; and 3) Interstate 35 near the Lake Marion Substation.[452]

332. Regarding U.S. Highway 169 near the Minnesota River crossing at Le Sueur, the original proposed alignment for the Modified Preferred Route crosses certain lands on which Mn/DOT holds scenic easements near the Minnesota River Valley Safety Rest Area.[453]

333. Based on its review of the scenic area, Mn/DOT stated it could not issue a permit for that proposed alignment.[454]

334. Mn/DOT explained "[t]he federal regulation governing scenic easements appears to restrict Mn/DOT's ability to grant a permit to CapX2020 for this location."[455]

335. The federal regulation referred to by Mn/DOT is 23 C.F.R. § 645.209(h) which Mn/DOT stated does not allow for new utility installations on "highway right-of-way or other lands which are acquired or improved with Federal-aid or direct Federal highway funds and are located within or adjacent to areas of scenic enhancement and natural beauty."[456]

336. Exceptions to 23 C.F.R. § 645.209(h) are permitted for aerial installations when "extensive removal or alteration of trees or terrain features" are not required and "(i) other locations are not available or are unusually difficult and costly, or are less

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[450] Ex. 140 at Schedule 47 (Poorker Supplemental).

[451] Ex. 140 at Schedule 47 at p. 11 (Poorker Supplemental).

[452] Ex. 140 at Schedule 47 at pp. 10-14 (Poorker Supplemental).

[453] Ex. 140 at Schedule 47 at pp. 11-12 (Poorker Supplemental).

[454] Ex. 140 at Schedule 47 at p. 12 (Poorker Supplemental); 23 C.F.R. § 645.209(h).

[455] *Id*.

[456] Ex. 140 at Schedule 47 at p. 12 (Poorker Supplemental); 23 C.F.R. § 645.209(h).

desirable from the standpoint of aesthetic beauty; (ii) placement underground is not technically feasible or unreasonably costly; and (iii) the proposed installation will be made at a location, and will employ suitable designs and materials, which give the greatest weight to the aesthetic qualities of the area being traversed."[457]

337. In response to this concern, Applicants developed the Myrick Alternative, which modifies the proposed alignment of the Modified Preferred Route in a manner so that the transmission line does not run through the Minnesota River Valley Safety Rest Area.[458]

338. At the evidentiary hearing, Mn/DOT's witness David Seykora stated that Mn/DOT did not foresee any difficulties with issuing an Utility Permit for the Modified Preferred Route provided the scenic easement areas were not crossed. When asked if the Applicants' Myrick Alternative alignment satisfied this criteria, Mr. Seykora responded that "it looks to be an alignment that would not fall within the category of being nonpermitable."[459]

339. Mn/DOT expressed concern regarding the permitability of Applicants' routes near the proposed Hampton Substation site at Highway 52 because of a frontage road/access closure project that is being planned that would convert this segment to a controlled access area. Mn/DOT preferred that any utility crossings or longitudinal placements meet freeway standards to avoid future relocations.[460]

340. Mn/DOT also identified a joint effort with Dakota County to convert a nearby overpass to a full interchange which would possibly necessitate the transmission line poles being placed outside the area of the new interchange.[461]

341. At the evidentiary hearing, Mn/DOT's witness Mr. Seykora discussed Mn/DOT's permitting concerns with Highway 52 and stated that Mn/DOT could likely issue a permit for the proposed alignments along Highway 52.[462]

342. Mn/DOT also questioned the permitability of the area near the Lake Marion Substation on I-35.[463]

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[457] Ex. 140 at Schedule 47 at p. 12 (Poorker Supplemental); 23 C.F.R. § 645.209(h).

[458] Ex. 140 at pp. 11-13 (Poorker Supplemental).

[459] Seykora Vol. 4 at pp. 37-38.

[460] Ex. 140 at Schedule 47 at p. 13 (Poorker Supplemental).

[461] *Id*.

[462] Seykora Vol. 3 at p. 177.

[463] Ex. 140 at Schedule 47 at pp. 13-14 (Poorker Supplemental).

343. The terrain near the Lake Marion Substation has rolling hills, and in many locations the ground is higher than the roadway surface.[464]

344. In circumstances where the ground at the right-of-way is lower than the roadway surface, Mn/DOT explained the utility poles would need to be located some distance away from the right-of-way boundary. Also to the extent the Modified Preferred Route traverses the New Market Safety Rest Area or runs through the interchange at 260th Street, Mn/DOT would not be able to grant a Utility Permit.[465]

345. During the Evidentiary Hearing, Mn/DOT acknowledged that Applicants' proposed alignment was on the opposite side of the road from the New Market Rest Area and that Mn/DOT could permit such an alignment.[466]

346. During the Evidentiary Hearing, Mn/DOT's witness Mr. Seykora discussed the segment of I-35 near the Lake Marion Substation, and stated the Mn/DOT anticipated being able to accommodate the placement of transmission poles within a few feet of the right-of-way boundary.[467]

347. While Mn/DOT did not provide comments regarding Minnesota Highway 50/220th Street prior to the Evidentiary Hearing, Mn/DOT's witness Mr. Seykora stated at the Evidentiary Hearing that the Modified Preferred Route segments that parallel Minnesota Highway 50/220th Street appeared to be permittable.[468]

2. USFWS and MnDNR

348. USFWS and MnDNR expressed concern about the "high concentrations of waterfowl during migration periods, and a heron rookery…within the proposed Le Sueur/US 169 project corridor at the Minnesota River Valley."[469]

349. USFWS and MnDNR did not request that non-aerial options be considered for the Granite Falls and the Upper Minnesota River crossings because new impacts to the resources in those areas will be limited.[470]

350. Due to the concern regarding migratory birds within the proposed Le Sueur/U.S. Highway 169 project corridor, USFWS and MnDNR did not prefer the Le Sueur crossing, recommended consideration of crossing the Minnesota River at Belle

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[464] *Id*.

[465] *Id*.

[466] Seykora Vol. 3 at pp. 178-179.

[467] *Id*.

[468] Seykora 3 Vol. at pp. 182-183.

[469] Ex. 140 at Schedule 44 at p. 1 (Poorker Supplemental).

[470] Ex. 102 at p. 52-54 (Poorker Direct).

Plaine, and inquired about the feasibility of using a non-aerial design for the Lower Minnesota River crossing.[471]

351. In response, Applicants developed the Crossover Route for consideration and requested flexibility to work with USFWS and MnDNR to develop structures and spans that will minimize bird impacts if a Belle Plaine crossing is selected.[472]

352. The Modified Preferred Route with a Lower Minnesota River crossing at Le Sueur would minimize impacts to the Minnesota River Valley because 1) the land use near the point of crossing the Minnesota River at Le Sueur features industrial uses, thereby reducing impacts to homes and sensitive environmental features; and 2) greater opportunities for sharing existing corridors exist at Le Sueur.

353. Crossing the Minnesota River at Belle Plaine was not supported by the Belle Plaine City Council because it "will potentially cause long-term negative impacts due to its close proximity to the Minnesota River Valley and its scenic beauty, wildlife and natural environment."[473] The Belle Plaine City Council further found the Belle Plaine crossing "creates an undue hardship on future private development and impedes the City's ability to provide logical extensions of roads and other public infrastructure to serve the development."[474]

354. The record also demonstrates USFWS has concerns regarding potential avian impacts at both proposed crossings, Le Sueur and Belle Plaine.[475]

355. On February 8, 2010, USFWS provided additional comments regarding the Minnesota River crossing alternatives near Le Sueur and Belle Plaine. USFWS informed Applicants that it had concluded that "both the proposed Le Sueur and Belle Plaine crossings will likely disturb nesting, foraging, and winter roosting eagles" and such disturbances, among others, "are a violation of the Bald and Golden Eagle Protection Act."[476] USFWS has permits available for activities that impact eagles but such a permit would not be available unless a permit applicant "has first taken all practicable steps to avoid take of eagles."[477] USFWS urged Applicants to further analyze non-aerial crossings of the Minnesota River at Le Sueur and Belle Plaine.[478]

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[471] Ex. 140 at Schedules 42-46 (Poorker Supplemental).

[472] Ex. 140 at p. 3-7 (Poorker Supplemental).

[473] Ex. 402.

[474] *Id*.

[475] Ex. 140 at Schedules 42-46 (Poorker Supplemental).

[476] USFWS February 8, 2010 Letter at p. 1, filed 2/9/10, Doc. Id. 20102-46903-01.

[477] *Id*.

[478] *Id*.

356. On February 8, 2010, Mn/DNR stated that it had not identified any new issues with the Le Sueur and Belle Plaine crossings.[479] Mn/DNR did not ask Applicants to analyze undergrounding of the proposed HVTL.

3. Undergrounding

357. For both Le Sueur and Belle Plaine, Applicants analyzed undergrounding alternatives. Applicants also analyzed co-locating on an existing bridge and co-locating on a newly constructed stand-alone pier for the Le Sueur crossing; and analyzed co-locating on an existing transmission structure for the Belle Plaine crossing.[480]

358. Applicants also studied undergrounding for the Minnesota River crossings at Granite Falls (which is common to the Modified Preferred Route and Alternate Route), North Redwood (needed only for the Alternate Route), and Redwood Falls, Brown County (needed only for the Modified Preferred Route). Applicants evaluated the Cross Linked Polyethylene ("XLPE") technology for the undergrounding process.[481] This construction method involves a casing that would be directionally bored beneath the Minnesota River at each river crossing and the conductor would be installed in the casing.[482]

359. Applicants' witness Mr. Kevin Lennon identified some of the difficulties with directionally boring under the river, including the possibility of encountering unknown bedrock or boulders during the drilling phase, which could result in damage to drilling equipment.[483]

360. Applicants' witness Mr. Poorker also explained that undergrounding does not alleviate visual impacts, as large transition structures are needed on both sides of the river crossing;[484] and presents several environmental impacts, such as: i) significant excavation and relatively large work areas, ii) risk that drilling mud could escape into the river environment as the result of a spill, and iii) disturbance to riverbed and aquatic vegetation.[485]

361. Applicants evaluated two different underground construction methods: 1) a hydro-plowing procedure that partially imbeds the new transmission line, referred to as submarine cables, in the bottom of the river; and 2) a horizontal directional drilling

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[479] MnDNR February 8, 2010 Letter, filed 2/10/10, Doc. Id. 20102-46952-01.

[480] Ex. 104 at pp. 1-9 (Lennon Direct).

[481] Ex. 104 at p. 12 (Lennon Direct).

[482] *Id.*

[483] *Id.*

[484] Ex. 102 at p. 55 (Poorker Direct).

[485] Ex. 102 at p. 56 (Poorker Direct); Ex. 141 at pp. 2-4.

("HDD") method that directionally bores a casing beneath the Minnesota River with conductors installed in the casing.[486]

362. Either approach is likely possible from a technical perspective but presents significant environmental and construction concerns.[487]

363. If undergrounding is selected, it would be the first such installation in the State. There are no 345 kV transmission facilities undergrounded in Minnesota.[488]

364. Submarine cables are susceptible to damage from floods, river debris and boat anchors.[489]

365. Submarine cables require significant additional materials to protect from the ingress of water.[490]

366. Submarine cables will disturb the riverbed and aquatic vegetation and could impact water quality and aquatic organisms.[491]

367. HDD can encounter unknown bedrock or boulders resulting in damage to equipment or the use of new boring paths.[492]

368. HDD will require significant excavation and relatively large work areas.[493]

369. HDD drilling mud could escape into the river environment as the result of a spill, tunnel collapse or rupture of the mud surface.[494]

370. Both HDD and submarine cable methods will require transition stations wherever the new transmission line would go from overhead to underground and vice versa. Given the limited space near the river, these transition structures would need to be located at the top of each bluff.[495]

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[486] Ex. 141 at p. 2 (Lennon Supplemental); Lennon Vol. 4 at p. 97.

[487] Ex. 141 at p. 2 (Lennon Supplemental); Lennon Vol. 4 at p. 97.

[488] Ex. 105 at p. 4 (Lennon Rebuttal); Lennon Vol. 4 at p. 99.

[489] Ex. 141 at pp. 2-3 (Lennon Supplemental).

[490] Lennon Vol. 4 at p. 89-92.

[491] Ex. 141 at p. 3 (Lennon Supplemental); Ex. 102 at p. 56 (Poorker Direct).

[492] Ex. 104 at pp. 12-13 (Lennon Direct); Ex. 141 at p. 3 (Lennon Supplemental).

[493] Ex. 102 at p. 56 (Poorker Direct).

[494] Ex. 102 at p. 56 (Poorker Direct).

[495] Ex. 104 at pp. 12-13 (Lennon Direct); Ex. 141 at p. 3 (Lennon Supplemental).

371. Placing the new transmission lines along or beneath the Minnesota River will cause inspections of conductors to be cumbersome and repairs to be time intensive.[496]

372. The cost for both of these undergrounding construction techniques would be approximately $400 million more than the proposed overhead construction option.[497]

373. Due to the significant environmental impacts, construction challenges and costs, undergrounding at Le Sueur or Belle Plaine is not a superior alternative to a traditional aerial crossing.

374. For the remaining Minnesota River crossings at Granite Falls, North Redwood, and Redwood Falls, Brown County, Applicants eliminated undergrounding due to the significant cost and environmental and construction challenges.

375. The record does not support an underground design at any of the river crossings.

4. Le Sueur: Co-locating on U.S. Highway 169 Bridge

376. Applicants analyzed co-locating the new 345 kV transmission line on the U.S. Highway 169 bridge through Le Sueur.[498]

377. For the new 345 kV transmission line, the U.S. Highway 169 bridge would need to be able to support the weight of cables, protective pipes and other supporting materials, which amount to approximately 1,200 pounds per foot. Typically, bridges such as the U.S. Highway 169 bridge are not designed to carry the extra weight associated with transmission facilities and are generally restricted from doing so due to design limits.[499]

378. Co-locating a new transmission line on the U.S. Highway 169 bridge would impact traffic during construction and maintenance because the bridge must be closed to traffic to ensure the safety of the crew and the public during these periods.[500]

379. Mn/DOT advised that co-locating the Project on the U.S. Highway 169 bridge would require a Utility Permit and that Mn/DOT's Accommodation Policy does not allow attaching a high voltage transmission line to bridge structures.[501] Mn/DOT also

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[496] Ex. 104 at pp. 13-14 (Lennon Direct).

[497] Ex. 104 at p. 14 (Lennon Direct); Ex. 141 at p. 4 (Lennon Supplemental); Lennon Vol. 4 at p. 96-98.

[498] Ex. 141 at p. 4 (Lennon Supplemental).

[499] Ex. 141 at p. 5 (Lennon Supplemental).

[500] *Id*.

[501] Ex. 140 at Schedule 47 at p. 16 (Poorker Supplemental)

expressed concern about the safety of attaching high voltage transmission lines to the bridge structure.[502]

380. The cost for co-locating the new 345 kV transmission line on the U.S. Highway 169 bridge near Le Sueur would be approximately $400 million more than proposed overhead construction option.[503]

381. Due to the significant environmental impacts, permitting concerns, construction challenges and costs, co-locating on an existing bridge in Le Sueur is not feasible.

5. Le Sueur: Co-locating on Newly Constructed Self-Supporting Pier

382. Applicants evaluated constructing a self-supporting pier and attaching the new 345 kV transmission line to the pier.[504]

383. The self-supporting pier structures would present several significant design challenges to accommodate the weight of the cables, the span required to cross the Minnesota River, and the heat dissipation needed for the cables.[505]

384. Transition stations are needed close to a river where there is a transition of an HTVL line from overhead to underground. Due to flooding concerns in the vicinity of the Minnesota River, there is concern that insufficient area is available to put in place the required transition structures.[506]

385. Mn/DOT also observed that the stand-alone pier would have to be constructed far enough away from the U.S. Highway 169 bridge to allow workers on bridge inspection units to perform their jobs safely.[507]

386. Due to the significant environmental impacts, permitting concerns, construction challenges and costs, co-locating on a newly constructed self-supporting pier in Le Sueur is not feasible.

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[502] Ex. 140 at p. 16 (Poorker Supplemental); Ex. 141 at p. 5 (Lennon Supplemental).

[503] Ex. 141 at p. 6 (Lennon Supplemental).

[504] Ex. 141 at p. 6 (Lennon Supplemental); Ex. 140 at p. 4 (Poorker Supplemental).

[505] Ex. 141 at p. 6 (Lennon Supplemental).

[506] Ex. 140 at pp. 4-5 (Poorker Supplemental).

[507] Ex. 140 at Schedule 47 at p. 13 (Poorker Supplemental).

6. Belle Plaine: Installation Including an Existing Transmission Line

387. Applicants evaluated two overhead alternatives for crossing the Minnesota River at Belle Plaine.[508]

388. Applicants identified two types of structures that could be used in conjunction with the existing 69 kV transmission line with distribution line underbuild and its 60 foot right-of-way.[509]

389. The first is a triple circuit H-frame structure with underbuild which would allow the new double circuit 345 kV line to be co-located on the same structure as the existing 69 kV line and associated distribution line. The total right-of-way would be approximately 180 feet in width and the structures would be approximately 180 feet tall. A triple circuit H-frame structure costs approximately $280,000.[510]

390. In Applicants' February 8, 2010 letter to the ALJ, Applicants referred to the triple circuit H-frame structure as a "four circuit H-frame structure." The reference to a "four circuit H-frame structure" is the same as triple circuit H-frame structure but also denotes that the structure would contain a distribution underbuild. With either structure there will be three transmission lines: two 345 kV circuits and one 69 kV circuit.[511]

391. The other alternative is a double circuit H-frame structure which would be placed adjacent to the existing 69 kV line on a new right-of-way. The expected right-of-way width is 180 feet and the structures would be approximately 170 feet tall. The cost for this structure is approximately $260,000.[512]

392. Both alternatives present environmental concerns. The triple circuit H-frame is taller and may have greater avian impacts than the shorter double circuit H-frame. Either structure will increase the needed right-of-way and "require significant tree clearing and would also impact wetlands, including forested wetlands."[513]

393. Using either structure to cross the Minnesota River at Belle Plaine will cost approximately $3.6 to $3.7 million.[514]

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[508] Ex. 141 at p. 7 (Lennon Supplemental); Ex. 140 at p. 5 (Poorker Supplemental).

[509] Ex. 141 at p. 7 (Lennon Supplemental); Ex. 140 at p. 5 (Poorker Supplemental).

[510] Ex. 141 at p. 7 (Lennon Supplemental); Ex. 140 at p. 5 (Poorker Supplemental).

[511] Applicants February 8, 2010 Letter at p. 1, filed 02/08/10, Doc. Id. 20102-46898-05.

[512] Ex. 141 at p. 7 (Lennon Supplemental); Ex. 140 at p. 5 (Poorker Supplemental).

[513] Ex. 140 at pp. 5-6 (Poorker Supplemental).

[514] Ex. 141 at p. 7 (Lennon Supplemental).

394. Applicants have expressed a preference for the double circuit H-frame structure.[515]

395. If a Belle Plaine crossing is selected, Applicants requested flexibility to work with USFWS and MnDNR to identify the final structure type for the Lower Minnesota River crossing.[516]

O. Evaluation of Alternatives

396. Minnesota high voltage transmission line routing criteria allows for the consideration of alternatives to the proposed route.[517]

397. Approximately 47 segment alternatives and 21 alignment alternatives were studied by the OES in the draft EIS.[518]

398. Regarding the alignment alternatives, the majority are appropriate. Applicants have asked for flexibility to work with affected landowners and develop the most appropriate alignment.[519]

399. Applicants performed a screening analysis on each segment alternative, compared them to the comparable segment of the Modified Preferred Route, and concluded the Modified Preferred Route best meets the State's route selection criteria.[520]

400. Applicants conducted a screening analysis for the segment alternatives. These analyses were discussed at the public hearings. Applicants described the results as set out the following Findings.

401. Segment alternative 1A-03 was found to be inferior because it impacts more forested wetlands; impacts two more homes within 75-150 of the route right-of-way; would be closer to housing developments on south side of Marshall; crosses more streams; impacts more acres of prime farmland; impacts more WMAs; and is closer to the Southwest Minnesota Regional Airport.[521]

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[515] Applicants February 8, 2010 Letter at pp. 4-5, filed 02/08/10, Doc. Id. 20102-46898-05.

[516] Ex. 141 at p. 8 (Lennon Supplemental); Ex. 140 at pp. 5-6 (Poorker Supplemental).

[517] Minn. Stat. § 216E.03, subd. 7(b)(7).

[518] Ex. 16 at pp. 6, 13 (EIS Scoping Decision); Ex. 102 at p. 39 (Poorker Direct).

[519] Ex. 103 at p. 9 (Poorker Rebuttal).

[520] Ex. 102 at p. 39 (Poorker Direct); Ex. 104 at p. 10 (Lennon Direct).

[521] Ex. 23 at Figures 7.1.4.1-1, 7.1.4.8-1 and 7.1.4.10-1 (DEIS).

402. Segment alternative 1P-01 was found to be inferior because it does not use as much existing road rights-of-way.[522]

403. Segment alternative 1P-02 was found to be inferior because it has more permanent wetland impacts; impacts more WMAs; and is closer to the city of Ghent and as a result limits expansion to the south and east.[523]

404. Segment alternative 2B-01 was found to be inferior because it will impact more wetlands than the Modified Preferred Route; presents difficulties near the Granite Falls Municipal Airport since the route is about 1,000 feet from the end of the runway; increases the potential for impacting more homes; does not utilize existing electrical system rights-of-way; and requires significant coordination with the Burlington Northern-Santa Fe Railway Company (BNSF) to share existing railway right-of-way.[524]

405. Segment alternative 4B-04 was found to be inferior because it does not support the reliable operation of the transmission system by paralleling an existing 345 kV line; impacts more agricultural lands; increases small forest impacts; and increases impacts to wetlands.[525]

406. Segment alternative 4B-05 was found to be inferior because it is longer and requires more corner structures; and impacts more homes and even displaces several residences.[526]

407. Segment alternative 5A-01 was found to be inferior because it may potentially displace several residences; does not maximize the use or paralleling of natural division lines; and increases impacts to woodlots, agriculture, archaeological sites, and architectural sites.[527]

408. Segment alternative 5A-02 was found to be inferior because it adds more distance and corner structures; impacts more wetlands; impacts more agricultural fields; and may cost more to maintain due to a lack of field lines and roads.[528]

409. Segment alternative 5A-03 was found to be inferior because it impacts more forests; may displace several residences; increases impacts to agricultural land;

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[522] Ex. 23 at Figure 7.1.4.9-1 (DEIS).

[523] Ex. 23 at Figures 7.1.4.11-2, 7.1.4.10-1 (DEIS).

[524] Ex. 23 at Figure 7.2.4.11-2 (DEIS).

[525] Ex. 23 at Figures 7.4.4.1-1, 7.4.4.11-2 (DEIS); Poorker 1A Vol. at pp. 66-67.

[526] Ex. 23 at Figure 7.4.4.1-1 (DEIS).

[527] Ex. 23 at Figures 7.5.4.1-1, 7.5.4.1-2, 7.5.4.6-1, 7.5.4.6-2, 7.5.4.11-2, 7.5.4.12-2 (DEIS).

[528] Ex. 23 at Figure 7.5.4.11-2 (DEIS).

increases the number of homes within 75-150 feet of the right-of-way; and may cost more to maintain due to a lack of roads.[529]

410. Segment alternative 5A-04 was found to be inferior because it may displace a home; increases the acreage of WPAs in close proximity to the route; and presents FAA concerns since the route is within one mile of the Sky Harbor Airpark.[530]

411. Segment alternative 5B-02 was found to be inferior because it impacts significantly more homes; and will run through the Town of Heidelberg.[531]

412. Segment alternative 5P-03 was found to be inferior because it goes through the center of Elko New Market and would disrupt future commercial area and development plans; increases impacts to residences in Elko New Market; and would be within one-half mile of Eagle View School.[532]

413. Segment alternative 6A-02 was found to be inferior because it impacts more residences; and requires more distance to reach the proposed substation sites.[533]

414. Segment alternative 6A-03 was found to be inferior because it impacts more residences; requires more angle structures; and requires more distance to reach the proposed substation sites.[534]

415. Segment alternative 6P-07 was found to be inferior because it increases the number of homes within 150 feet of the right-of-way.[535]

416. Segment alternative 6P-08 was found to be inferior because it impacts more wetlands; increases impacts to agricultural lands; impacts more rare and unique natural resources; increases the length of the line; and does not connect to the Lake Marion Substation.[536]

417. Applicants conducted additional analysis of the route width and alignment adjustments needed to accommodate RES Pyrotechnics in Derrynane Township of Le Sueur County to better understand the impacts on neighboring landowners; of the Johnsons' route Alternatives 6P-03 and 6P-06 at Hampton because they were the only alternatives offered by a party to the proceeding; and of the CSAH 70 route Alternatives

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[529] Ex. 23 at Figure 7.5.4.1-1 (DEIS); Poorker Vol. 1A at pp. 85-86.

[530] Ex. 23 at Figures 7.5.4.1-1, 7.5.4.12-2 (DEIS); Poorker Vol. 1A at pp. 87-88.

[531] Ex. 23 at Figure 7.5.4.1-1 (DEIS).

[532] *Id*.

[533] Ex. 23 at Figure 7.6.4.1-1 (DEIS).

[534] *Id*.

[535] Ex. 23 at Figure 7.6.4.9-1 (DEIS).

[536] Ex. 23 at Figure 7.6.4.11-2, 7.6.4.1-1 (DEIS).

near Lakeville because there was support for these alternatives from Eureka Township of Dakota County and its residents.

418. Applicants also analyzed the Myrick Alternative because it addressed concerns about the Modified Preferred Route crossing Mn/DOT's scenic easements; and addressed suggestions made at public hearings to relocate the Lake Marion Substation from its present site in New Market Township, Scott County.

1. Route width and alignment adjustments for RES

419. After the Application had been filed, Applicants and OES received a letter from RES, a company that manufactures pyrotechnics and fireworks displays in the Belle Plaine Area.[537]

420. RES expressed concern that its facilities are located along a common segment of the Preferred and Alternate routes which may "impact safe manufacturing and storage of RES's pyrotechnics and fireworks displays and associated explosive materials" and requested the transmission line be located at least 1,000 feet east from the proposed centerline alignment or be placed along a different route entirely.[538]

421. In response to RES's concerns, Applicants initially identified two segment alternatives and proposed these alternatives during the scoping process.[539]

422. Applicants analyzed the two segment alternatives and found neither of them to be clearly superior to the comparable segment of the Modified Preferred Route. One of these route alternatives is on the west side ("West Route") and the other is one the east side ("East Route") of RES's facilities. The West Route segment is approximately 1.25 miles wide running from the west of RES property to the west of County Road 32, between the Helena South and Helena North Substation areas. The East Route is approximately 0.5 miles wide running from RES property east to County Road 121, then running from 296th Avenue north to the Helena North Substation area.[540]

423. Subsequent research by Applicants revealed a guide published by the Institute of Makers of Explosives ("IME"), which stated "[m]agazines should be located from overhead transmission lines at a distance greater than the distance between the poles and towers supporting the lines. Service lines of all types should, except for telephone connections and similar low-voltage intercom or alarm systems, be run

[537] Ex. 102 at p. 40 (Poorker Direct).

[538] Ex. 102 at pp. 40-41 (Poorker Direct).

[539] Ex. 102 at p. 41 (Poorker Direct).

[540] Ex. 102 at p. 41 (Poorker Direct).

underground from a point at least 50 feet away from the explosive storage magazine."[541]

424. Applicants determined the closest explosive storage magazine would be located approximately 60 feet from the centerline of the segment of the Preferred and Alternate routes east of the RES property.[542]

425. Based on this information and the IME guideline, Applicants reevaluated the route segment alternatives proposed near the RES facilities, and also developed an alignment adjustment to the Modified Preferred Route ("RES 1,000 feet").[543]

426. Applicants are now requesting a Route Permit for the Modified Preferred Route with the RES 1,000 feet alignment adjustment.

427. Construction on the RES 1,000 feet alignment would cause impacts to adjacent property owners near the RES facility. The RES 1,000 feet alignment has 16,860 square feet or 0.4 acres of permanent pole impacts to agricultural lands.[544]

428. A significant portion of those permanent pole impacts will be borne by Theresa Ruhland. Mrs. Ruhland explained the placement of transmission poles on her farm fields would make farming more difficult as well as impact the landowner to the south.[545] She testified that "[a]s proposed, I would have the CapX line about 800 feet to the south, 400 feet to the west, 5,000 feet to the north and the existing Xcel 345 line 5,200 feet to the east. We will be totally encompassed by either a double 345 or single 345 lines."[546]

429. The RES 1,000 feet alignment has fewer environmental impacts, is shorter, and has fewer temporary and permanent impacts to agricultural land than the other route segment and alignment alternatives on the record.[547]

430. In comments filed March 8, 2010, OES staff implies that the Project's line could be safely sited closer to the RES facility, thus minimizing further the impacts to the Ruhlands' farmland. It is noted that the comment's text implies that the RES site is located on the section line between Sections 2 and 3 in Derrynane Township, whereas it is actually on a line that bisects Section 3 into east and west halves.

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[541] Ex. 105 at p. 2 (Lennon Rebuttal); Ex. 103 at pp. 17-18 (Poorker Rebuttal).

[542] Ex. 105 at p. 3 (Lennon Rebuttal); Ex. 103 at pp. 18-19 (Poorker Rebuttal).

[543] Ex. 105 at p. 3 (Lennon Rebuttal); Ex. 103 at pp. 18-19 (Poorker Rebuttal).

[544] Ex. 103 at pp. 19-20 (Poorker Rebuttal).

[545] Lakeville Public Hearing, 12/10/09 at 1 p.m. at pp. 181-2; Ex. 358.

[546] Lakeville Public Hearing, 12/10/09 at 7 p.m. at p. 36.

[547] Ex. 103 at pp. 19-20 (Poorker Rebuttal).

2. Johnsons' Segment Alternatives 6P-06

431. The Applicants find Route Alternative 6P-06 at Hampton to be inferior to the Modified Preferred Route Segment along Highway 50 (220th Street), and extending east after the road ends, in great part because Alternative 6P-06 has a greater impact on agricultural land (e.g., five irrigation pivots would be displaced).

432. The Johnsons submitted an alternative route segment in the Hampton area, between the Lake Marion substation and the proposed Hampton substation to minimize impacts on human settlement, land use and the environment. This route was carried forward in the Final Scoping Decision and the DEIS as Route Alternative 6P-06.[548]

433. Applying the State routing factors contained in Minnesota Statutes §216E.03, Subd. 7 and in Minnesota Rules, 7850.4000 and 7850.4100, Alternative 6P-06 minimizes impacts on human settlement, cultural values, unique land uses and the natural environment. This alternative may have more impacts on agriculture than the Modified Preferred Route Segment in the Hampton vicinity, along Highway 50 and beyond.

434. Applicants agree that, at every distance, Alternative 6P-06 affects fewer homes than the Applicants' Preferred Route in the Hampton area. Alternative 6P-06 affects fewer homes within 500 feet of the centerline, fewer homes within 300 feet of the centerline and fewer homes within 150 feet of the centerline.[549] The DEIS reflects that Alternative 6P-06 would reduce the number of homes from 75 to 150 feet of the route centerline by two and would reduce the number of homes within 500 feet of the route centerline by 15.[550]

435. In the local Hampton area, Alternative 6P-06 would reduce the number of homes in proximity to the high voltage power line. Focusing on the Hampton area reflected in Attachment 4A and 4B[551] and measuring distances using detailed GIS maps, comparative proximity of homes to the centerline is as follows:[552]

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[548] Tr. V. 3, p. 103, ll.5-12 (MacDonagh).

[549] Tr. V. 1B, p. 22, ll. 2-9, p. 23, ll. 19-23 (Poorker)

[550] Ex. 23, Appendix E (DEIS).

[551] Attachment 4A is Ex. 202 (Route Alternatives Map); Attachment 4B is Ex. 202, annotated to identify the locations contained in public comment received after the hearing opposing Applicants' Preferred Route in the Hampton area.

[552] Tr. V. 3, p. 94, l.25 – p. 95, l.4, p. 96, ll.8-20 (MacDonagh), Ex. 222 (Aerial Photo); Ex. 203 (Route Comparison).

	Homes 75'-150' from centerline	Homes 150'-300' from centerline	Homes 300'-500' from centerline	Total Homes within 500' from centerline	Homes 500-1000' from centerline	Total Homes within 1000' from centerline
6P-Applicants Preferred	3	14	11	28	12	40
Alternative 6P-06	1	7	5	13	7	20
Increase if Applicants' Route is Selected	**200%**	**100%**	**140%**	**115%**	**71%**	**100%**

436. Many individuals provided testimony and public comment regarding adverse impacts on their homes and families resulting from the Applicants' Preferred Route. A summary of those comments is provided in this Report.

437. Alternative Route 6P-06 would eliminate adverse impacts on religious and cultural land uses in the Project segment from Lake Marion to Hampton. The Watt Munisotaram Buddhist Temple is the only religious institution of any kind affected by the Lake Marion to Hampton segment of the Brookings Project, and no churches or temples or other religious land uses are located along the 6P-06 Alternate Route.[553]

438. Applicants agree that the Watt Munisotaram Buddhist Temple has religious and cultural significance to Buddhists in Minnesota and across the United States and that its architectural and aesthetic values are part of its cultural significance:

> (Ms. Maccabee)
> Q. After public testimony, are applicants aware of the cultural and religious significance of the Watt Munisutaram Buddhist Temple to Buddhists throughout Minnesota?
> (Mr. Poorker)
> A. Yes, I am.
> Q. And aware of the significance of this temple to Buddhists throughout the United States?
> A. Yes.
> Q. And possibly even to Buddhists throughout the world?
> A. Yes.
> Q. And after public testimony, are you also aware that the architectural beauty of this temple is an important part of its cultural significance?

[553] Tr. V. 1B (Poorker), p. 28 ll. 4-16; Ex. 202 (Route Alternatives Map).

A. Yes.[554]

439. Applicants have admitted that if there is an alternative route available, it would be appropriate to avoid the impacts of Applicants' preferred route on the Watt Munisotaram Temple:

(Ms. Maccabee)

Q. Would you agree that if there is an alternative route available, it would be appropriate to avoid the impacts on this unique religious and cultural resource?

(Mr. Poorker)

A. I would agree that an alternate route as suggested would remove the impact, possible impact to the temple.

Q. And would you agree that it would be appropriate, if an alternate route were available, to avoid the impacts on this unique religious and cultural resource?

A. Yes.[555]

440. The Applicant's Preferred Route would run on 220th Street in Hampton. A portion of the property along that Route is planned for use by Douglas Kruger, as a landing strip for ultralight planes. Mr. Kruger maintained that take offs and landings would be rendered unsafe if the Applicants' Preferred Route on 220th Street were selected.[556]

441. Percy Scherbenske's Castle Rock Thoroughbred stud farm and the *Picture This* photography business on the Rice property are land uses that would be impacted by the Applicants' Preferred Route.

442. The Johnsons' expert witness, Peter MacDonagh, is a landscape architect, certified arborist and trained wetland delineator, who teaches courses at the University of Minnesota in ecology and ecological planning and has received awards for ecological design.[557] Mr. MacDonagh compared the impacts of the Applicants' Preferred Route and Alternative 6P-06 in terms of water crossings, wetlands and rare and unique natural resources, concluding, in each of these areas, that Alternative 6P-06 substantially reduced the impacts on the natural environment as compared to the Applicants' Preferred Route in the Hampton Segment.[558]

443. The South Branch Vermillion River trout stream is considered by the Trout Unlimited as the best urban trout fishery in the United States. As compared with Alternative 6P-06, Applicants' Preferred Route would increase the number of trout

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[554] Tr. V. 1B, p. 53, l. 20 – p. 54, l.8 (Poorker)

[555] Tr. V. 1B, p. 55, l. 16 - p. 56, l.2 (Poorker)

[556] Kruger Comment (Doc. Id. 20101-46433-03, pp. 4-5).

[557] Tr. V. 3, pp. 87-88, p. 121, ll.1-8 (MacDonagh); Ex. 201, Sched. 1 (MacDonagh Direct).

[558] Ex. 201, p. 14, ll. 7-10 (MacDonagh Direct).

stream crossings from three to five and increase the power line frontage along the Vermillion River from 2,800 feet to 3,600 feet.[559]

444. Impacts of the Applicants' Preferred Route on wooded wetlands would be particularly significant because the wetlands impacted drain into the Vermillion River South Branch, a cold water trout fishery fed by groundwater.[560] Applicants' Preferred Route would run for more than 1,000 linear feet through wooded wetlands draining into the Vermillion River South Branch, and if Applicants decided not to put a power line pole on property occupied by the Buddhist Temple, Applicants would need to have at least two poles in these wooded wetlands east of the Temple.[561]

445. Applicants acknowledge that Alternative 6P-06 affects fewer acres of wetlands within 100 feet of the power line's centerline than their Preferred Route and fewer acres of wetlands within 500 feet of the centerline.[562]

446. The Hampton Woods contains oak mesic woodland of outstanding significance and is the largest natural area within Dakota County that is not associated with the Minnesota or Mississippi River corridors.[563] Applicants agree that Hampton Woods is an area of outstanding biodiversity that contains several endangered species and that the Alternative 6P-06 centerline would be considerably farther away from the Hampton Woods than the Applicants' Preferred Route.[564] The route width requested by Applicants could extend south of 220th Street to the edge of the Hampton Woods.[565]

447. Even if the power line were routed on the north side of 220th Street, Applicants' Preferred Route would require clearing trees along the 150-foot right-of-way through woods extending from the Hampton Woods to the north side of 220th Street.[566]

448. Applicants' Preferred Route would create edge impacts to the Hampton Woods due to the height of support poles and wires, allowing predatory birds to pick off specialist bird species. Such predatory birds perching on the wires could bring back invasive seedlings, creating plant incursions to interior woodlands.[567] From a landscape

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[559] Tr. V. 3, p. 106, l. 20 –p. 107, l. 6 (MacDonagh); Ex. 203 (Route Comparison); Tr. V. 1B, p. 27, ll. 13-20 (Poorker).

[560] Tr. V. 3, p. 117, l. 18 –p.118, l. 9 (MacDonagh).

[561] Tr. V. 3, p. 115, ll. 6-12, p. 119, ll. 1-9 (MacDonagh); Ex. 223 (Aerial Photo).

[562] Tr. V. 1B, p. 27, ll. 3-12 (Poorker).

[563] Tr. V. 3, p. 109, ll.6-15, p. 110, l. 19 – p. 111, l. 5 (MacDonagh).

[564] Tr. V. 1B, p. 30, l. 25-p. 31, l. 9 (Poorker)

[565] Craig Poorker stated that Applicants would be willing to commit to limit their route to the north side of 220th where it parallels Hampton Woods. Tr. V. 1B, p. 87, ll. 7-10 (Poorker).

[566] Tr. V. 1B, p. 30, ll. 15-24 (Poorker); *see also* Ex. 109, Sched. 41, Map 1 (Poorker Rebuttal) and Ex. 222 (Aerial Photo) showing extension of Hampton Woods north of 220th Street.

[567] Tr. V. 3, p. 112, ll.7-18; p. 123, ll. 6-24; p. 128, ll.6-20, (MacDonagh).

ecology point of view, distance to the disturbance is an important consideration and Alternative 6P-06 would reduce impacts on the Hampton Woods.[568]

449. Applicants' Preferred Route and Alternative 6P-06 both include some portions of the Route that extend cross-country in the Hampton Area.[569]

450. Applicants' Preferred Route and Alternative 6P-06 create impacts to farmland and crops, some of which are permanent.[570] Some farmers could be adversely affected by either potential route.[571] Farmers along both routes have raised concerns about use of pivot irrigation systems near HVTLs. Based on comments received, Applicants estimate that Alternative 6P-06 will impact one more pivot irrigation system than their Preferred Route.[572]

451. Routing of a 345 kV power line can be accomplished around a pivot irrigation system, and the existing Prairie Island to Blue Lake 345 kV power line in the Hampton area is located in proximity to several pivot irrigation systems.[573] Standards for accommodating pivot irrigation systems are specifically set forth in the Agricultural Impact Mitigation Plan,[574] and farmers will be compensated for adverse impacts to pivot irrigation.[575] Any adverse impacts to pivot irrigation will be mitigated.

452. There are no significant differences in engineering factors associated with Alternative 6P-06 and Applicants' Preferred Route.[576]

453. If the Hampton North Substation were selected, construction of Alternative 6P-06 would cost $192,000 more than Applicants' Preferred Route. If the Hampton South Substation were to be selected, construction of alternative route 6P-06 would cost approximately $2.8 to $3.1 million more,[577] out of a project cost of $700 million to

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[568] Ex. 201, p. 14, l. 12- p. 16, l. 5(MacDonagh Direct); Tr. V. 3, p. 112, ll.20-23 (MacDonagh).

[569] See Ex. 23, Appendix E (DEIS); Pub. Com. of Tom Rother Pub. Com. (Doc. Id. 20102-46701-01, p. 27).

[570] Tr. V. 1B, p. 39, ll. 15-19 (Poorker); Pub. Com. of Larissa and Brian Foss (Doc. Id. 20101-46701-01, pp. 11-12); Pub. Com. of Tom Rother (Doc. Id. 20102-46701-01, pp. 27-28); Pub. Com. of Ardis Bengtson/Monna Bergdall/ Vida Kollath (Doc. Id. 20101-46593-01, p. 6); Ex. 382B (Klaus Statement); Ex. 382A (Perry Statement); Ex. 390 (Duff Statement).

[571] Test. of Jon Juenke, Tr. Pub. H. 12/29/09, pp. 113-114 (New Prague); Ex 389 (C. Louis Statement); Pub. Com. of Jennifer Gerster (Doc. Id. 20101-46593-01, p. 2); Pub Com. of Richard Gerster (Doc. Id. 20101-46485-01, p. 2).

[572] Ex. 389, p. 2 (C. Louis Statement); Pub. Com. of Jennifer Gerster (Doc. Id. 20101-46593-01, p. 2); Pub. Com. of Richard Gerster (Doc. Id. 20101-46485-01, p. 2); Tr. V. 1B, p. 52, ll.1-9 (Poorker).

[573] Tr. V. 1B, p. 51, ll. 6-15 (Poorker); Test. of Robert Johnson, Tr. Pub. H. 12/10/09, p. 108, ll. 4-25 (Lakeville 7:00 pm); Ex. 213, 214, 215, 216 (Irrigation Photos).

[574] Ex. 108, Sched. 17, p. 7 of 15 (Poorker Direct).

[575] Test. of Craig Poorker, Tr. Pub. H. 12/29/09, p. 178, l.25 – p. 179, l. 11 (New Prague).

[576] Tr. V. 1B, p. 56, ll. 12-15 (Poorker).

[577] Ex. 109, Sched. 40, p. 4 (Poorker Rebuttal).

$755 million.[578] Public testimony suggests that right-of-way acquisition costs are likely to be higher for the Applicants' Preferred Route due to proximity of homes and residents' choices to sell their property to the utilities.[579]

454. Selection of Alternative 6P-06 is appropriate. The avoidance of impacts by the Modified Preferred Route on a Buddhist Temple, the Vermillion River and its tributaries, and avoiding a greater number of residences and businesses outweighs the impacts on agricultural land and the Vermillion River and its tributaries that will occur if Alternative 6P-06 is selected.

3. CSAH 70 Segment Alternatives

455. As Applicants were developing the Application, Eureka Township and Eureka Township residents submitted comments recommending that the Project be routed along CSAH 70.[580]

456. Applicants evaluated five CSAH 70 alternatives: (1) the CSAH 70 Alternative, (2) 6P-01, (3) 6P-08, (4) 6P-05 and (5) the FAA CSAH 70 Segment Alternative.[581]

457. The "CSAH 70 Alternative" is an approximately 12-mile long alternative that follows I-35 and existing transmission lines north from the Lake Marion Substation and then heads east at the southern side of Lakeville along CSAH 70 (215th Street West), and then north along Hamburg Avenue for 0.5 miles, and east on CSAH 50 (212th Street West/Lakeville Boulevard). The CSAH 70 Alternative turns south on CSAH 31 (Denmark Avenue) west of Farmington to reconnect with the Preferred Route.[582]

458. 6P-01 is a segment alternative that follows Interstate 35 north from where the Preferred and Alternate Routes meet, crossing Interstate 35 east to 215th Street West. It proceeds east along 215th Street to Hamburg Avenue and follows it north to Lakeville Boulevard. It then precedes east on Lakeville Boulevard, then south on Denmark Avenue to 225th Street West, where it heads southeast cross-country 0.5 miles, and then north-northwest 0.3 miles, connecting with the Preferred Route.[583]

459. 6P-08 is a segment alternative that starts at the Alternate Route at I-35 and 57th Street West and heads east cross-country approximately three miles to 307th

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[578] Ex. 104, p. 8 (Lennon Rebuttal).

[579] Pub. Com. of Matt Grilz (Doc. Id. 20101-46295-01, p. 5); Pub. Com. of Eric Johnson (Doc. Id. 20101-46433-02, pp. 1-2); Pub. Com. of Bruce Lamp (Doc. Id. 20102-46900-03, p. 17).

[580] Ex. 102 at p. 43 (Poorker Direct); Ex. 104 at p. 15 (Lennon Direct).

[581] Ex. 102 at pp. 44-45 (Poorker Direct); Ex. 104 at p. 15 (Lennon Direct).

[582] Ex. 102 at p. 44 (Poorker Direct).

[583] Ex. 102 at p. 45 (Poorker Direct).

Street West. The segment then continues along 307th Street to Eveleth Avenue and east cross-country approximately one mile, then northeast following along an existing rail line and 69 kV transmission line for approximately seven miles, to 240th Street West. At this point, the segment connects with the Preferred Route.[584]

460. 6P-05 is a route segment alternative that begins at the Preferred Route at Lake Marion Substation and follows Pillsbury Avenue north to 215th Street West. The route then heads east along 215th Street to Cedar Avenue and then continues east cross-country for approximately 0.5 miles. The route then proceeds southeast 1.8 miles, and then east approximately one mile to 220th Street West. From there, the route segment proceeds south down 220th Street to Denmark Avenue, and heads south along Denmark Avenue, veering southeast cross-country at 225th Street West to reconnect with the Preferred Route.[585]

461. The FAA CSAH 70 Segment Alternative is a Plan and Profile developed by Applicants to obtain permitability input from the FAA.[586] The FAA CSAH 70 Segment Alternative is based on the CSAH 70 Alternative, with two revisions. First, the FAA CSAH 70 Segment Alternative continues along CSAH 70 further east, until Cedar Avenue.[587] Second, the route goes north on Cedar Avenue to CSAH 50, instead of heading north on Hamburg Avenue.[588]

462. All of the CSAH 70 segment alternatives use the same approximately 2.4-mile stretch of the south side of CSAH 70 between 215th Street and Hamburg Avenue.[589]

463. Applicants' witness Mr. Kevin Lennon identified the engineering issues presented by the CSAH 70 Segment Alternatives.[590]

464. The CSAH 70 segment alternatives will have a greater impact to residences and businesses because the 2.4-mile segment along CSAH 70 east of the Lake Marion Substation is an area that is congested with residences and commercial buildings.[591]

465. Portions of CSAH 70 are within the flight path clearance zones and the secondary avoidance area of the Airlake Airport south of Lakeville. Also, the Airlake

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[584] *Id*.

[585] *Id*.

[586] Ex. 104 pp. 27-29 (Lennon Direct).

[587] Ex. 104 at p. 28 (Lennon Direct).

[588] *Id*.

[589] Ex. 102 at p. 45 (Poorker Direct).

[590] Ex. 104 at pp. 15-30 (Lennon Direct).

[591] Ex. 104 at pp. 16-17 (Lennon Direct); Poorker Vol. 1A at p. 91.

Airport plans to expand the primary runway to 5,000 feet off the south end of the airport, which will expand the secondary avoidance area.[592] The FAA and Mn/DOT height restrictions in this area would preclude the use of the single pole structures proposed for the Project.[593]

466. Even if the facilities could be designed to meet FAA requirements, the conductors would need to be hung over the tops of existing buildings.[594]

467. Due to FAA maximum height restrictions and the National Electrical Safety Code ("NESC") minimum height restrictions, there is a very limited space for structures and conductors.[595]

468. Side-by-side low profile H-frame structures are the only structure that could accommodate the FAA and NESC restrictions.[596]

469. Side-by-side low profile H-frame structures result in conductors spread approximately 250 feet across and traversing over the tops of the buildings along CSAH 70.[597]

470. Traversing the tops of buildings creates safety concerns for people working on roof top heating and ventilation units, roofers, and any others working on the roof tops.[598]

471. The low profile designs required by the CSAH 70 Alternatives result in placement of structures in parking lots, access roads, and other areas typically containing underground services such as telephone, sewer, water, and gas.[599]

472. Hanging conductors over the top of existing buildings does not comport with Applicants' standard practice, which is to acquire right-of-way free of any structures.[600]

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[592] Ex. 104 at pp. 16-17 (Lennon Direct.

[593] Ex. 104 at pp. 16-17 (Lennon Direct); Poorker Vol. 1A at p. 91.

[594] Ex. 104 at pp. 16-17 (Lennon Direct).

[595] *Id*.

[596] *Id*.

[597] *Id*.

[598] *Id*.

[599] *Id*.

[600] Ex. 104 at pp. 17 (Lennon Direct).

473. The use of specialty structures to accommodate the CSAH 70 segment alternatives will increase costs between $25.6 to $29.0 million.[601]

474. Applicants submitted a Notice of Proposed Construction or Alteration to the FAA and the FAA confirmed that the FAA CSAH 70 Segment Alternative with structures located on the north side of CSAH 70 near Airlake Airport presents a hazard to air navigation and cannot be constructed. The FAA CSAH 70 Segment Alternative is technically infeasible.[602]

475. Applicants also evaluated an underground option that would extend 7.1 miles along CSAH 70 and CSAH 50 between I-35W and the City of Farmington.[603]

476. Undergrounding transmission lines presents engineering challenges. Underground conductors generally operate at higher temperatures than overhead transmission lines which results in reduced efficiency, an increased risk of outages, and a shorter life span for the conductor.[604] An underground transmission line is also expected to require earlier replacement than an overhead transmission line.[605]

477. Construction of the proposed underground facilities along CSAH 70 and CSAH 50 is estimated to cost $416 million.[606] This is approximately $402 million more than the overhead construction option for this segment.[607]

478. The CSAH 70 segment alternatives create additional environmental impacts not present in Applicants' proposed routes. Applicants' witness Mr. Poorker provided an abbreviated list of these complications in his pre-filed Direct Testimony:

> [T]he Modified Preferred Route has no homes or businesses in the anticipated right-of-way for the facilities. The chart shows that the FAA CSAH 70 Segment Alternative would require displacement of 12 houses in the right-of-way along County Road 50. In addition, I believe there would be numerous homes affected once a side of the road were selected for the three D-PAK alternatives. All four of the CSAH 70 alternatives have businesses within the right-of-way, whereas the Applicants' Modified Preferred Route has none. Similarly, the Modified Preferred Route affects fewer

[601] Ex. 104 at p. 25 (Lennon Direct).

[602] Ex. 104 at pp. 28-29 (Lennon Direct).

[603] Ex. 104 at pp. 26-27 (Lennon Direct).

[604] Ex. 104 at p. 26 (Lennon Direct).

[605] *Id*.

[606] Ex. 104 at p. 27 (Lennon Direct).

[607] *Id*.

> center pivot irrigation systems. The Modified Preferred Route also has fewer homes within 500 feet of the line and the fewest Vermillion River crossings (one crossing). Further, the Modified Preferred Route is farther away from the Airlake Airport and Very High Frequency Omni-directional Radio Range.[608]

479. The record demonstrates that none of the CSAH 70 segment alternatives are technically feasible, and even if constructible, these alternatives would present significant engineering challenges and environmental impacts.

480. It is appropriate to reject the CSAH 70 Segment Alternatives.

4. Myrick Alternative Alignment

481. Applicants' Myrick Alternative was developed to address concerns about the Modified Preferred Route crossing Mn/DOT scenic easements.[609]

482. Applicants' Myrick Alternative has impacts on human settlement and land based economies similar to the other alignments of the Modified Preferred Route corridor in the Le Sueur area.[610]

483. The Modified Preferred Route with the Myrick Alternative alignment affects the same landowners as the Modified Preferred Route with the original alignment. There are five homes (two at 150-300 feet and three at 300-500 feet) within 0-500 feet of the Myrick Alternative right-of-way. In comparison, there are three homes (three at 150-300 feet) within 0-500 feet of the Modified Preferred Route right-of-way.[611]

484. Regarding land-based economies, the Modified Preferred Route with the Myrick Alternative alignment will impact 31 acres of prime farmland, prime farmland if drained and farmland of statewide importance whereas the Modified Preferred Route with the original alignment will impact 23 acres.[612]

485. The Modified Preferred Route with the Myrick Alternative alignment will impact 35 acres of cropland and grassland whereas the Modified Preferred Route with the original alignment will impact 37 acres.[613]

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[608] Ex. 102 at p. 49 (Poorker Direct).

[609] Ex. 140 at pp. 10-12 (Poorker Supplemental).

[610] Applicants' January 19, 2010 Letter to ALJ at Route Impact Table, filed 01/19/10, Doc. Id. 20101-46155-01.

[611] *Id*.

[612] *Id*.

[613] *Id*.

486. Applicants also applied several other of the State's routing factors to assess the Myrick Alternative's impact to the immediate environment.[614]

487. The Modified Preferred Route with the Myrick Alternative alignment will share 53% of its corridor with existing rights-of-way.[615]

488. There are four streams and rivers, one wetland and one MCBS biodiversity site that will be crossed by the Modified Preferred Route with the Myrick Alternative alignment.[616]

489. The Modified Preferred Route with the Myrick Alternative alignment does not cross any forested wetlands.[617]

490. There are 10 threatened and endangered species, five archaeological sites and three historical sites within one mile of the Modified Preferred Route with the Myrick Alternative alignment's centerline.[618]

491. The City of Le Sueur offered Mayo Park to enable a possible modification to the Modified Preferred Route.[619] On January 5, 2010, the City of Le Sueur clarified that its proposal to offer the use of Mayo Park's "existing transmission corridor/easement was made on the presumption that the stated 'Preferred Route' was the inevitable route as it approached the Minnesota River."[620] The City of Le Sueur clarified that its proposal was "only made with the understanding that IF WE WERE GOING TO BE COMPELLED TO DEAL WITH A TRANSMISSION LINE CROSSING we wished to try to lessen its effect on our citizens, natural resources and neighbors."[621]

492. During the public hearing at New Prague, Bimeda, Inc., an animal pharmaceutical manufacturing company, expressed concern about the proximity of the Myrick Alternative to the company's facilities.[622] Bimeda is located at 291 Forest Prairie Road in Le Sueur and believes the Myrick Alternative will cause the line to be located

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[614] *Id*.

[615] *Id*.

[616] *Id*.

[617] Applicants' January 19, 2010 Letter to ALJ at Route Impact Table, filed 01/19/10, Doc. Id. 20101-46155-01.

[618] *Id*.

[619] Ex. 327; Henderson Public Hearing, 12/7/09 at 7 p.m. at pp. 23-24.

[620] City of Le Sueur January 5, 2010 Letter, filed 01/11/10, Doc. Id. 20101-45824-01.

[621] *Id*. (Emphasis in original.)

[622] New Prague Afternoon Transcript, 12/28/09 at pp. 191-197.

too close to its proposed storage tanks which will contain isopropyl alcohol.[623] Isopropyl alcohol is a flammable product that is produced by combining water and propane.[624]

493. Bimeda filed a comment letter dated January 28, 2010, asserting that the proposed lines should be located at least 750 feet from the proposed tanks. Bimeda did not, however, cite any statute or regulation that requires a specific distance between transmission lines and isopropyl alcohol tanks.[625]

494. There is no standard or rule that requires transmission lines to be a particular set distance from isopropyl alcohol tanks.[626]

495. Applicants have experience constructing and operating transmission lines near other types of tanks storing flammable materials and have safely built and operated these facilities.[627]

496. If the Modified Preferred Route is selected, Applicants will design the line to ensure that the tanks are outside the right-of-way and will work with Bimeda on the final alignment of the line.[628]

497. No CAPX contends that the Myrick Alternative is not available for consideration as it was not part of the EIS review and it was withdrawn by its proposer, Duane Kamrath. No CAPX maintains that "foundational information" regarding the Myrick Alternative should have been a part of the routing docket immediately upon filing, and the agency concerns should have been acknowledged and addressed as part of Applicants' case. No CAPX also contends that the OES failure to forward information and important communications to the administrative side of this proceeding and post it for the public immediately upon receipt puts all the parties at a disadvantage.[629]

498. Applicants responded that they have provided notice to the persons affected by the Myrick Alternative because those persons were within the area for which property owners were required to be notified. Additionally, Applicants note that the pervasive knowledge of this proceeding throughout the community has afforded actual knowledge to property owners affected by this alternative.[630]

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[623] *Id*.

[624] *Id*.

[625] Bimeda January 29, 2010 Letter to ALJ at p. 4-5, filed 01/29/10 (Doc. Id. 20101-46568-02).

[626] Applicants February 8, 2010 Letter at p. 2, filed 02/08/10 (Doc. Id. 20102-46898-05).

[627] Applicants February 8, 2010 Letter at pp. 2-3, filed 02/08/10 (Doc. Id. 20102-46898-05).

[628] Applicants February 8, 2010 Letter at p. 3, filed 02/08/10 (Doc. Id. 20102-46898-05).

[629] No CAPX Reply Brief, at 4-6.

[630] Applicants' Reply Brief, at 27-28.

499. Applicants have included the lists of those given notice on December 30, 2008, in the record of this proceeding. Examination of these lists shows a number of addresses along the Myrick Alternative.[631] Several of the persons who provided public comment on the Myrick Alternative appear on the lists. There has been no failure of notice to potentially affected landowners so as to preclude consideration of the Myrick Alternative.

500. Numerous landowners testified that they did not receive the notice mailed by OES on September 18, 2009, advising them of the possibilty that the route segment proposals included in the Draft EIS could affect their property. OES noted that these landowners primarily were present in Marshall during the December 1, 2009 public hearings.[632] The affidavit of service for that notice listed approximately 4,100 landowners as having been notified individually by a mailing handled by ImageWerks, a company retained by Applicants to handle the mass mailing to all those individuals listed.[633] OES suggested that there may have been a mishap involving the postal service since these landowners seemed to be all in one general area near Marshall. The proximity of the landowners who complained of a lack of notice suggests a failure at some point in the bulk mailing process.

501. Despite the lack of individual mailed notice, these landowners did have actual notice of the proceeding and many of them were able to participate in the hearings and comment process. The Minnesota Court of Appeals held that individual notice in such circumstances where the route segment is not identified in the initial application is not necessary to meet constitutional and Commission rule notice requirements.[634] The notice provided in this proceeding, including the Marshall area and Myrick Street segment is adequate to inform the potentially affected landowners of the proposed HVTL and provide an opportunity for them to participate.

502. Applicants' Myrick Alternative is mostly within the originally requested route in this area. This modification would entail adding a polygon approximately 4,700 feet in length and 600 feet at its widest point for which no assessment was conducted in the DEIS.[635]

503. The additional polygon was outside the formally requested route width as submitted to the Commission. This area was not included in the scoping of the route nor evaluated in the DEIS. For these reasons, OES contended that the Myrick

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[631] Ex. 8, (Doc. Id. 5722823).

[632] *See* Tr. Vols. Dec. 1, 2009.

[633] Ex. 21A.

[634] *ITMO the Application of Minnesota Pipe Line Company for a Certificate of Need for a Crude Oil Pipeline and ITMO the Application to the Minnesota Public Utilities Commission for a Pipeline Routing Permit for a Crude Oil Pipeline and Associated Aboveground Facilities*, A07-1318 (Minn.Ct.App. June 10, 2008)("*MinnCan*").

[635] Ex. 140, Sch. 51 (Poorker Supplemental Testimony).

Alternative requires further evaluation as to the potential environmental impacts from this transmission facility. OES cited, as an example, moving the preferred route alignment along U.S. 169 to the proposed Myrick Alternative as potentially creating new and unevaluated problems for new residents, Mayo Park, and the Bimeda facility. While OES acknowleged that the Myrick Alternative alleviates the problems associated with MnDOT's rest area and scenic easements, OES expressed concern about the potential for undiscovered problems.[636]

504. The proposed Myrick Alternative arose from Applicants' need to accommodate Mn/DNR's scenic easements. The polygon outside of the area scoped and assessed for impacts is of modest size and is immediately adjacent to the area that was scoped and assessed. The evidence presented through this proceeding regarding residential impacts, the effects on Mayo Park, and the potential for impact to Bimeda do not show that the Myrick Alternative should be foreclosed. The concerns raised by OES can be met by requiring that the FEIS be supplemented by assessing the polygon not previously included in the FEIS. Should the Commission determine that a supplement is needed for the FEIS to be deemed adequate, such a supplement to the FEIS is appropriately limited to the specific impacts raised by routing the HVTL through the Myrick Alternative over the limited area that was not already assessed. A supplement of such limited scope imposes a modest burden on the OES EFP staff and can provide reassuance that no further impediment exists to the HVTL crossing the Minnesota River at Le Sueur and proceeding along Myrick Street to connect the line to points east.

505. It is appropriate to select the Applicants' Myrick Alternative Route within the Modified Preferred Route Segment in the Le Sueur area.

5. No CapX 2020 and Minnesota Citizens Action Network

506. Attorney Carol Overland, representing No CAPX 2020 and UCAN, raised several concerns in her Posthearing Filings. She recommended that the Application be rejected because it fails to establish an appropriate place to cross the Minnesota River (unless the crossing is accomplished by underground burial or drilling), and to reject the Final Environmental Impact Statement (FEIS) as inadequate. After a review of the arguments, the Administrative Law Judge is unable to recommend the proposals of No CAPX 2020 and UCAN.

507. Ms. Overland suggests in her Briefs that the Hearing should be reopened for further evaluation regarding Minnesota River crossings, and that a Public Hearing be conducted in Belle Plaine. Regarding the necessity for a Public Hearing in Belle Plaine, the Administrative Law Judge is not persuaded one is necessary, or was necessary for inclusion among the Hearings conducted previously. Concerns of a number of people from the Belle Plaine area were expressed at Henderson, Lakeville and New Prague. The record also includes extensive written comment from people regarding the proposed Belle Plaine crossing by the Applicants' Alternate/Crossover Route. The

[636] OES Comments, at 12.

Administrative Law Judge made the decision to conduct public hearings in Henderson on the assumption that people concerned about crossing the routes at Belle Plaine would appear for that proceeding, or at New Prague. It is noted also that the Administrative Law Judge has not recommended a Belle Plaine crossing, but is persuaded that the Applicants' Modified Preferred Route, which crosses the Minnesota River in the vicinity of Le Sueur is appropriate for adoption. It is noted that the record supports the feasibility of a crossing at Belle Plaine, if crossing at Le Sueur is rejected.

508. Ms. Overland's concern that two completely distinct physical route alternatives are needed for an application to be proper is misplaced. First, the Public Utilities determined that the Application was complete and met all the requirements set forth in Minn. R. 7850.1900, Subp. 2, which includes the requirement to contain at least two proposed routes for any high voltage transmission line, and identification of a choice between them of a preferred and alternate route, with reasons for the preference. The Public Utilities Commission ruled on this issue January 29, 2009, and raising it at this time is out of order.

509. Ms. Overland argues that the Public Utilities Commission, in deciding to form only two advisory task forces, to the exclusion of Advisory Task Forces in the Marshall to Belle Plaine areas, is a procedural irregularity contributing to a basis for dismissal of the Application. Administrative Law Judge does not agree. The Office of Energy Security (OES) has established that the applications for formation of advisory task forces from Townships in Lyon County were deficient.[637]

510. The arguments by No CAPX 2020 and UCAN to the effect that the Minnesota Department of Transportation and the City of Le Sueur do not support Applicants' Myrick Street Alternative, offered by Applicants' witness Mr. Poorker in testimony filed on November 14, 2009, is also misplaced. Mn/DOT witness David Seykora testified at the Evidentiary Hearing that Applicants' Myrick Street Alternative would not be impermitable, because it does not interfere with the scenic easements held by the Mn/DOT in the Le Sueur vicinity adjacent to Highway 169. The fact that Duane Kamrath withdrew his Myrick Street Alternative does not mean that the Myrick Street Alternative offered by Applicants was also withdrawn from consideration.

511. The Administrative Law Judge finds that Ms. Overland's interpretation of the letter from the Mayor of Le Sueur, attached to Mr. Kamrath's withdrawal of his Myrick Street Alternative, is incorrect. The City of Le Sueur, by that communication, does not remove from consideration its offer of Mayo Park property to the Applicants for possible routing of their final right-of-way.

512. Ms. Overland relies on a February 10, 2010 comment by the Department of Natural Resources for concluding that the Final Environmental Impact Statement is

[637] *See* Ex. 43. Among other problems, the documents from Westerheim and Grandview Townships did not indicate support from a Member of the Southwest Regional Planning Commission, as required by Minn. Stat. § 216E.08, subd. 1.

inadequate. The February 8, 2010 letter submitted by Jamie Schrenzel, Planner Principal for the DNR, notes some difficulties and issues with the Environmental Impact Statement, most specifically the Draft Environmental Impact Statement, which makes it difficult for the DNR to provide constructive input about which route or segments would best protect state resources if information such as estimated acreage for permanent and temporary impacts for each location, total impact acreage for each route, and specific mitigation plans are not provided. The Administrative Law Judge finds that Ms. Overland's conclusion from the DNR's writing, which is reproduced in part at page 11 of her Reply Brief, is inconsistent and taken out-of-context from the general tenor of the Schrenzel letter, which suggests future meetings between the DNR and the Applicants regarding specific impacts that result from construction, and the presence of, a 345 kV transmission line in certain areas along the Route. The letter notes, for instance:

> The DNR recommends that an independent environmental monitor be employed to evaluate compliance with permanent requirements during project construction. An environmental monitor employed by the DNR or an independent firm may also be required as part of license to cross permitting.[638]

Schrenzel writes also:

> The project applicant is encouraged to coordinate directly with the DNR through a pre-application meeting(s) concerning impacts to DNR administered land, public water wetlands and state-listed species prior to application for waters permits and utility licenses to cross public lands and public waters. The applicant is encouraged to further develop mitigation plans for impacts related to these resources and review these with the DNR prior to applying for any DNR permits.[639]

513. When viewed as a whole, the February 8, 2010 letter from the Department of Natural Resources does not specifically recommend that the Final Environmental Impact Statement is inadequate, and it implies strongly that the DNR will work closely with the Applicants to address its concerns along any route chosen by the Public Utilities Commission.

514. Counsel also argued that it was appropriate to deny a Route Permit because the record did not contain cost figures for the Proposed Route(s) and did not specify the proposed apportionment of costs among its developers, including Applicants Xcel and Great River Energy. As noted in the Applicants' Reply Brief, the cost figures and allocation percentages were provided in the initial application at §§ 2.6 and 1.1 respectively.[640] Xcel is the majority owner at 72% and GRE owns 16%. The remaining

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[638] Mn/DNR Comment, 02/10/2010 (Doc. Id. 20102-46952-01).

[639] *Id*.

[640] Applicants' Reply Brief, at 30.

ownership interests are divided between Otter Tail Power, MRES, and CMMPA.[641] Project costs are discussed in this Report at Finding 84. As noted above, the Commission has already approved the Certificate of Need for the Project and these issues cannot be revisited in this Docket.

515. No CAPX 2020 and UCAN argue that the FEIS should be found to be inadequate because it fails to address the maximum distance that the 345 kV wires to be used in the Project would move laterally in the highest foreseeable straight-line winds ("blowout"). Applicants provided blowout information to OES during the comment period on the Draft EIS.[642] The ALJ finds that this order of events does nothing to diminish the adequacy of the Environmental Impact Statement process for the Brookings Project. Applicants' submission was in response to Mn/DOT's filing which expressed concern and sought data relating to a number of issues, including blowout. Counsel urges a recommendation that the EIS process was inadequate because the issue was not entered into the Draft EIS, or raised earlier in the proceeding by OES staff during the EIS comment period that ended on November 30. The ALJ is not persuaded that a sanction of finding the OES's Environmental Impact Statement to be inadequate is warranted by this, or any other "irregularity" that counsel urges for consideration.

6. Lake Marion Substation

516. The Project consists of a 345 kV double-circuit compatible segment from the Helena Substation to Lake Marion Substation.[643]

517. Applicants plan to expand the Lake Marion Substation by adding 12 to 16 acres of fenced and graded substation area, install new equipment and construct associated line switches, foundations, steel structures, and control panels.[644]

518. At the Lakeville Public Hearing, a proposal was raised that sought to move the Lake Marion Substation to the south instead of expanding it.[645]

519. The Applicants contended that this proposal is not a valid alternative because the Certificate of Need for the Project requires an interconnection at the existing Lake Marion Substation.[646]

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[641] Application § 1.1 (Doc. Id. 5675982).

[642] Applicants' Letter to ALJ, 02/08/2010 (Doc. Id. 20102-46898-05) and Attachment 4 (Doc. Id. 20102-46898-08).

[643] Ex. 2 at pp. 5-6, 5-12 (Application).

[644] Ex. 2 at pp. 2-7, 2-8 (Application).

[645] Lakeville Public Hearing, 12/11/09 at 9:30 a.m. at pp. 39-40.

[646] Certificate of Need Order at pp. 14-16, 30-32, 42.

520. A proposal to move the Lake Marion Substation is not a valid alternative because the location of the Lake Marion Substation interconnection is outside the scope of this Route Permit proceeding.[647]

II. Application of Routing Criteria to the 115 kV Line Between Franklin Substation and Cedar Mountain Substation

521. The Brookings Project includes construction of a new Cedar Mountain Substation, which is designed to interconnect with the existing Wilmarth – Franklin 115 kV line.[648]

522. To accomplish this interconnection, Applicants propose to construct a new 115 kV transmission line between the Cedar Mountain Substation and the Franklin Substation.[649]

523. Applicants propose the Revised Cedar Mountain South 115 kV Route and the Cedar Mountain North 115 kV Route as alternatives.[650]

524. Applicants are requesting a Route Permit for the Revised Cedar Mountain South 115 kV Route as part of the Modified Preferred Route.[651]

525. The route for the Revised Cedar Mountain South 115 kV Route is described as follows: from the Cedar Mountain Substation South Area the Revised Cedar Mountain South 115 kV Route heads west toward the City of Franklin and the Franklin Substation. The route length is approximately 0.8 miles. The southern edge is located 150 feet south of an existing Franklin-Winthrop 69 kV transmission line while the northern edge of the route is approximately 300 feet north of 660th Avenue. The western edge extends approximately 250 feet west of the Wilmarth-Franklin existing 115 kV transmission line at which point the route narrows to approximately 0.5 miles in width (from 4225 feet) for approximately 0.9 miles. For this 0.5 mile segment, the southern edge of the route follows just south of the existing Wilmarth-Franklin 115 kV transmission line.[652]

526. The record confirms that the Revised Cedar Mountain South 115 kV Route meets the State routing criteria.[653]

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[647] *See* Minn. Stat. § 216E.02, subd. 2.

[648] Ex. 2 at § 7.3 (Application).

[649] Ex. 2 at §§ 7.3 and 9.3 (Application).

[650] *Id*.

[651] Ex. 102 at p. 10 (Poorker Direct).

[652] Ex. 102 at Schedule 2 (Poorker Direct).

[653] *Id*.

527. Regarding impacts to human settlement, the Revised Cedar Mountain South 115 kV Route will be designed to avoid displacement of existing homes and businesses. The record demonstrates that there will be no impacts associated with noise, cultural values, and public services.[654] Applicants will implement the appropriate safeguards during construction and operation to avoid any impacts to human health and safety.[655] Regarding impacts to land based economies, 27.0% of the Revised Cedar Mountain South 115 kV Route will cross prime farmland.[656] There are no anticipated impacts to any economic or forest resources, tourism, or mining.[657]

528. Regarding impacts to archaeological and historical resources, there are no archaeological sites, architectural sites, or historical landscapes within one mile of the Revised Cedar Mountain South 115 kV Route.[658]

529. Regarding impacts to the natural environment, the Revised Cedar Mountain South 115 kV Route is not anticipated to impact air quality. The Revised Cedar Mountain South 115 kV Route will cross four wetlands and one MCBS Biodiversity site. Impacts will be minimized or avoided by strategic pole placement.[659]

530. As to impacts to rare and unique resources, the record identifies one protected or rare species or habitats in the Revised Cedar Mountain South 115 kV Route area. Impacts will be minimized or avoided by strategic pole placement.[660]

531. No party submitted post-hearing comments contesting the appropriateness of issuing a Route Permit for the Revised Cedar Mountain South 115 kV Route for the proposed 115 kV transmission line between the Franklin and Cedar Mountain Substations.

III. <u>Route Width Flexibility</u>

532. The PPSA directs the Commission to locate transmission lines in a manner that "minimize[s] adverse human and environmental impact while ensuring continuing electric power system reliability and integrity and ensuring that electric energy needs are met and fulfilled in an orderly and timely fashion."[661]

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[654] *Id*.

[655] Ex. 102 at Schedule 2 (Poorker Direct); Ex. 2 at § 7.3 (Application).

[656] *Id*.

[657] *Id*.

[658] Ex. 102 at Schedule 2 (Poorker Direct); Ex. 2 at § 7.3 (Application).

[659] *Id*.

[660] *Id*.

[661] Minn. Stat. § 216E.02, subd. 1.

533. The PPSA further authorizes the Commission to meet its routing responsibility by designating a "route" with a "variable width of up to 1.25 miles."[662]

534. Applicants requested originally a route width of 1,000 feet for the 345 kV transmission line, and where necessary, flexibility to increase the width up to 1.25 miles, centered on the proposed alignment for the majority of the Modified Preferred Route.[663]

535. In their Reply Brief, Applicants agreed to narrow the route width to 600 feet except for locations identified in Attachment 2 to Applicants' Proposed Findings, where they request a width of 1,000 feet to 1.25 miles.[664]

536. The proposed route width is consistent with prior Route Permits issued by the Commission.[665]

537. In its February 8, 2010 letter, Mn/DOT indicated its support for designation of wide route widths along and across highway rights-of-way.[666] Mn/DOT stated, "Mn/DOT respectfully requests that the selected route at these locations be as wide as the full width of the routes proposed in the CapX2020 application. This would be sufficiently wide to enable Mn/DOT and CapX2020 to examine each pole location to determine where the [high voltage transmission line] HVTL can be placed to accommodate the needs of both parties."[667]

538. Applicants indicate that while a narrowed route may be workable in some areas, a wide route width will also be necessary in certain circumstances. In particular, if the Le Sueur Minnesota River crossing is approved, a wide corridor will be necessary for a crossing of the Minnesota River at Le Sueur to enable further coordination with landowners, Mn/DOT, MnDNR, USFWS, and the OES to develop a final alignment and design.[668]

539. Applicants are also requesting a wider route width for the 115 kV line between the Franklin Substation and Cedar Mountain Substation. Specifically,

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[662] Minn. Stat. § 216E.02, subd. 1.

[663] Ex. 2 at § 2.3 (Application).

[664] Applicants' Reply Brief, at 8.

[665] *See In the Matter of the Application for a HVTL Route Permit for the Badoura Transmission Line Project*, Docket No. ET-2, ET015/TL-07-76 Findings of Fact, Conclusions of Law and Order Issuing A Route Permit to Minnesota Power and Great River Energy For the Badoura Transmission Line Project And Associated Facilities (Oct. 31, 2007).

[666] Mn/DOT February 8, 2010 Letter, filed 02/08/10, Doc. Id. 20102-46900-07.

[667] *Id.*

[668] *See* Seykora Vol. 4 at p. 31 (testifying that "a 1,000 foot wide corridor along the highway appears to be sufficient to accommodate" Mn/DOT's general permitting concerns).

Applicants are requesting a route width of 4,225 feet for the Revised Cedar Mountain South 115 kV Route; and 1.25 miles for the Cedar Mountain North 115 kV Route.[669]

540. Attachment 2 to Applicants' Proposed Findings of Fact, Conclusions and Recommendation illustrates the areas where Applicants are seeking a route width up to 1.25 miles for the Modified Preferred Route.[670]

541. At the request of OES, Applicants analyzed a route width of 600 feet in certain locations of the Modified Preferred Route.[671]

542. Applicants' request for a route width of 1,000 feet and where necessary up to 1.25 miles for the Modified Preferred Route is consistent with the PPSA and appropriate given the circumstances of this Project to allow coordination with landowners and state and federal agencies to develop a final alignment and design.[672]

543. Applicants' Amended Request for a 600 foot-wide route width, except for those areas where they continue to request a width of 1,000 feet to 1.25 miles, for the Modified Preferred Route, whether or not modified by Alternate 6P-06, also is consistent with the PPSA.[673]

IV. Notice

544. Minnesota statute and rules require Applicants to provide certain notice to the public and local governments before and during the Application for a Route Permit process.[674]

545. Applicants provided notice to the public and local governments in satisfaction of Minnesota statutory and rule requirements.

546. In August 2008, Applicants mailed a letter to officials of local governments within the Project Area in accordance with Minn. Stat. § 216E.03, subd. 3a.[675]

547. On December 30, 2008, Applicants mailed a notice to landowners whose property was within or adjacent to proposed or alternate routes and substation sites, the

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[669] Ex. 102 at Schedule 2 (Poorker Direct).

[670] Applicants are providing Attachment 2 for the purpose of demonstrating those portions of the Modified Preferred Route where Applicants are requesting a route width of up to 1.25 miles. Applicants request a route width of 600 feet for the remainder of the route.

[671] Applicants February 8, 2010 Letter at p. 2, filed 02/08/10, Doc. Id.20102-46898-05.

[672] Minn. Stat. § 216E.02, subd. 1.

[673] *Id.*

[674] Minn. Stat. § 216E.03, subd. 3a; Minn. Stat. § 216E.03, subd. 4; Minn. R. 7850.2100, subp. 2; Minn. R. 7850.2100, subp. 4.

[675] Ex. 2 at p. 10-9 and Appendix J (Application).

original list of citizens on the Certificate of Need mailing lists and to the list of persons requesting notice of submitted High Voltage Transmission Line Applications for Route Permits maintained by the Commission in accordance with Minn. Stat. § 216E.03, subd. 4; Minn. R. 7850.2100, subp. 2(A); and Minn. R. 7850.2100, subp. 2(C).[676] All of the persons who will be affected by Applicants' Myrick Street Alternative received this notice.[677]

548. The affected Myrick Street landowners received specific notice that their property could be affected by Applicants' Myrick Street Alternative subsequent to the filing of the proposal on December 14, 2009.[678]

549. Between December 31, 2008, and January 1, 2009, Applicants published notice of the submission of the Route Permit Application in sixteen newspapers throughout the Project Area in accordance with Minn. R. 7850.2100, subp. 4.[679]

550. On January 5, 2010, Applicants mailed a notice and a CD-ROM copy of the Application to all officials of Local Government Units within the proposed and alternate routes in accordance with Minn. Stat. § 216E.03, subd. 4 and Minn. R. 7850.2100, subp. 2(B).[680]

551. On January 5, 2010, Applicants mailed a copy of the Application to seventeen public libraries within the Project Area in accordance with Minn. Stat. § 216E.03, subd. 4.[681]

552. In addition to notice requirements imposed by Minnesota Statutes and Minnesota Rules, the Applicants also provided notice to the public as follows during the Route Permitting Process:

- On March 17, 2009, Applicants mailed a notice of the EIS Scoping Meetings scheduled by OES to all landowners within the Project Area.
- On May 1, 2009, Applicants mailed a notice of additional routes proposed by the Applicants for inclusion in the EIS Scoping Document.[682]

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[676] Ex. 8 at pp. 2-102 (Applicant Mailed and Published Notices of Application Filing).

[677] *Id.*

[678] Under the Minnesota Court of Appeals holding in *MinnCan*, *supra*, individual notice when a route segment is not identified in the initial application is not necessary to meet constitutional and PUC rule requirements.

[679] Ex. 8 at pp. 144-63 (Applicant Mailed and Published Notices of Application Filing).

[680] Ex. 8 at pp. 103-43 (Applicant Mailed and Published Notices of Application Filing).

[681] Ex. 8 at pp. 164-66 (Applicant Mailed and Published Notices of Application Filing).

[682] Ex. 137 (Applicants' Notice to Landowners and Applicants' April 30, 2009 EIS Scoping Comments).

- On October 16, 2009, Applicants mailed a combined notice of DEIS availability, public meeting, and potential effect to all landowners along the Cedar Mountain 115 kV route alternative and the USFWS/DNR Alternative.[683]

- On December 22, 2009, Applicants mailed all landowners on the Project notice of the rescheduled New Prague Public Hearing.[684]

553. Minnesota statutes and rules also require OES to provide certain notice to the public throughout the Route Permit process.[685] OES provided this notice in satisfaction of Minnesota statutes and rules.

554. On March 9, 2009, and March 11, 2009, OES mailed the Notice of Public Information/Scoping Meetings in accordance with Minn. R. 7850.2300, subp. 2 and Minn. R. 7850.2500, subp. 2.[686] From March 16, 2009 through March 27, 2009, OES published the Notice of Public Scoping Meetings in newspapers throughout the Project Area in accordance with Minn. R. 7850.2300, subp. 2.[687]

555. On July 1, 2009, and July 2, 2009, OES mailed the Notice of Environmental Impact Statement Scoping Decision in accordance with Minn. R. 7850.2500, subp. 2.[688]

556. On October 20, 2009, OES mailed the Notice of DEIS Availability and Public Information Meetings in accordance with Minn. R. 7850.2500, subp. 7 and Minn. R. 7850.2500, subp. 8.[689]

557. On October 22, 2009, OES mailed paper copies of the DEIS to public libraries in each county where the proposed project may be located in accordance with Minn. R. 7850.2500, subp. 7.[690]

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[683] Ex. 27 (Applicants' Oct. 16, 2009 Notice to Landowners).

[684] Ex. 160 (Affidavit of Service New Prague Public Hearing Postcard Mailing).

[685] Minn. Stat. § 216E.03, subd. 6; Minn. R. 7850.2300, subp. 2; Minn. R. 7850.2500, subp. 2; Minn. R. 7850.2500, subp. 7; Minn. R. 7850.2500, subp. 8; and Minn. R. 7850.2500, subp. 9.

[686] Ex. 11 (OES Notice of EIS Scoping Meetings); Ex. 12 (OES Revised Notice of EIS Scoping Meetings).

[687] Ex. 37 (OES Scoping Meeting Newspaper Notices and Affidavits).

[688] Ex. 19 (OES Notice of Scoping Decision).

[689] Ex. 24 (OES Notice of DEIS and Public Information Meetings 10/20/09); Ex. 25 (OES Notice of DEIS and Public Information Meetings 10/20/09); Ex. 26 (OES Notice of DEIS and Public Information Meetings 10/22/09).

[690] Ex. 29 (OES Certificate of Service of DEIS to Libraries).

558. On November 2, 2009, OES published the Notice of DEIS Availability and Public Information Meetings in the EQB Monitor in accordance with Minn. R. 7850.2500, subp. 7.[691]

559. On November 6, 2009, OES mailed the Notice of Public Hearings in accordance with Minn. Stat. § 216E.03, subd. 6.[692]

560. Over a period from November 18, 2009 through November 20, 2009, OES published the Notice of Public Hearings in newspapers of general circulation in each county where the proposed project may be located in accordance with Minn. Stat. § 216E.03, subd. 6.[693]

561. On February 8, 2010, OES published the Notice of FEIS Availability in the EQB Monitor in accordance with Minn. R. 7850.2500, subp. 9.

562. OES published the Notice of FEIS availability in at least one newspaper of general circulation in the counties where the proposed routes are located in accordance with Minn. R. 7850.2500, subp. 9.

563. In addition to notice requirements imposed by Minnesota Statutes and Rules, OES also provided notice to the public as follows during the Route Permit process:

- On September 18, 2009, OES mailed a notice to landowners affected by one or more of the route alternatives proposed for evaluation in the EIS.[694]
- On October 14, 2009, the OES mailed a project update to those Minnesota State Representatives and Senators where the Project may be located within their district.[695]
- On October 23, 2009, OES mailed paper copies of the DEIS to the Administrative Law Judge, state and federal agencies with permitting authority for the Project, and the parties to the proceeding.[696]

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[691] Ex. 36 (OES Scoping Meeting Newspaper Notices and Affidavits).

[692] Ex. 30 (OES Notice of Public Hearing 11/06/09); Ex. 31 (OES Notice of Public Hearing 11/06/09); Ex. 32 (OES Notice of Public Hearing 11/06/09); Ex. 33 (OES Notice of Public Hearing 11/09/09).

[693] OES Affidavit of Public Hearing Notice Publication, filed 12/21/09, Doc. Id. 200912-45252-01.

[694] Ex. 21 (OES New Landowner Notification Letter 09/18/09).

[695] Ex. 22 (OES Notice to Legislators 10/14/09).

[696] Ex. 28 (OES Certificate of Service for DEIS 10/28/09).

- Over a period from November 4, 2009 through November 6, 2009, OES published the Notice of DEIS Availability and Public Information Meetings in newspapers throughout the Project Area.[697]

- On November 6, 2009, OES mailed the Notice of DEIS Availability, Public Information Meetings, and Public Hearings to landowners with property on or adjacent to the north-south connector routes.[698]

- On November 16, 2009, OES published a Notice of Public Hearing in the EQB Monitor.[699]

- On January 28, 2010, OES mailed the Notice of Availability of the FEIS to the project mailing list.[700]

- On January 28, 2010, OES mailed copies of the FEIS to public libraries in the areas where the proposed routes are located.[701]

V. Adequacy of FEIS

564. The Commission is required to determine the adequacy of the FEIS.[702] An FEIS is adequate if it: (A) addresses the issues and alternatives raised in scoping to a reasonable extent considering the availability of information and the time limitations for considering the permit application; (B) provides responses to the timely substantive comments received during the DEIS review process; and (C) was prepared in compliance with the procedures in Minnesota Rules 7850.1000 to 7850.5600.[703]

565. The record demonstrates that the FEIS is adequate because it addresses the issues and alternatives raised in the Scoping Decision, provides responses to the substantive comments received during the DEIS review process, and was prepared in compliance with Minnesota Rules 7850.1000 to 7850.5600.

CONCLUSIONS

1. The Public Utilities Commission and Administrative Law Judge have jurisdiction to consider Applicants' Application for a Route Permit. [704]

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[697] Ex. 38 (OES DEIS Newspaper Notices and Affidavits).

[698] Ex. 34 (OES Landowner Notice of North-South Connector Routes 11/06/09).

[699] Ex. 35 (EQB Monitor Notice of Public Hearing).

[700] OES Mailed Notice of FEIS Availability, filed 01/28/10, Doc. Id. 20101-46510-01.

[701] OES Affidavit of Mailing of FEIS to Libraries, filed 02/05/10, Doc. Id. 20102-46797-01.

[702] Minn. R. 7850.2500, subp. 10.

[703] *Id*.

[704] Minn. Stat. §§ 14.57-.62 and 216E.02, subd. 2.

2. The Commission determined that the Application was substantially complete and accepted the Application on January 29, 2009.

3. OES has conducted an appropriate environmental analysis of the Project for purposes of this route permit proceeding and the FEIS satisfies Minn. R. 7850.2500. Specifically, the FEIS addresses the issues and alternatives raised through the scoping process in light of the availability of information and the time limitations for considering the permit application, provides responses to the timely substantive comments received during the DEIS review process, and was prepared in compliance with the procedures in Minn. R. 7850.1000-7850.5600.

4. Applicants gave notice as required by Minn. Stat. § 216E.03, subd. 3a; Minn. Stat. § 216E.03, subd. 4; Minn. R. 7850.2100, subp. 2; and Minn. R. 7850.2100, subp. 4.

5. OES gave notice as required by Minn. Stat. § 216E.03, subd. 6; Minn. R. 7850.2300, subp. 2; Minn. R. 7850.2500, subp. 2; Minn. R. 7850.2500, subp. 7; Minn. R. 7850.2500, subp. 8; and Minn. R. 7850.2500, subp. 9.

6. Public hearings were conducted in communities located along the proposed high voltage transmission line routes. Applicants and OES gave proper notice of the public hearings, and the public was given the opportunity to speak at the hearings and to submit written comments. All procedural requirements for the Route Permit were satisfied.

7. The record demonstrates that the Modified Preferred Route, as modified by adoption of Alternative 6P-06 between Lake Marion and Hampton Substations, and its Associated Facilities, satisfies the route permit criteria set forth in Minnesota Statute § 216E.03, subd. 7 and Minnesota Rule 7850.4100.

8. The record establishes that the Crossover Route, connecting the Modified Preferred Route and Alternate Route in Sibley County, and crossing the Minnesota River west of Belle Plaine, as further revised by adoption of Alternative 6P-06 between Lake Marion and Hampton Substations, and its Associated Facilities, satisfies the route permit criteria set forth in Minnesota Statute § 216E.03, subd. 7 and Minnesota Rule 7850.4100.

9. The record demonstrates that the Modified Preferred Route, as further revised by Alternative 6P-06 in the Hampton area, is the best alternative for the 345 kV transmission line between Brookings County Substation and Hampton Substation.

10. The record demonstrates that it is appropriate to grant a Route Permit for the 345 kV transmission line and Associated Facilities along the Modified Preferred Route, modified by Alternative 6P-06.

11. The record demonstrates that it is appropriate for the Route Permit to provide the requested route width of 600 feet, except for those locations where Applicants are requesting a route width of 1,000 feet or up to 1.25 miles, as shown on

Attachment 2 to Applicants' Proposed Findings of Fact, Conclusions and Recommendation.[705]

12. The record demonstrates that the Revised Cedar Mountain South 115 kV Route satisfies the route permit criteria set forth in Minnesota Statute § 216E.03, subd. 7 and Minnesota Rule 7850.4100. No party submitted post-hearing comments contesting the appropriateness of issuing a Route Permit for the Revised Cedar Mountain South 115 kV Route for the proposed 115 kV transmission line between the Franklin Substation and Cedar Mountain Substation.

13. The record demonstrates that it is appropriate to grant a Route Permit for the Revised Cedar Mountain South 115 kV Route, as shown on Attachment 7.

14. The record demonstrates that it is appropriate for the Route Permit to provide Applicants with a route width of 4,225 feet, or approximately 0.5 miles where requested by the Applicants, for the Revised Cedar Mountain South 115 kV Route.

15. It is appropriate for the Route Permit to require Applicants to obtain all required local, state, and federal permits and licenses, to comply with the terms of those permits or licenses, and to comply with all applicable rules and regulations.

16. Any Findings more properly designated Conclusions are adopted as such.

THIS REPORT IS NOT AN ORDER AND NO AUTHORITY IS GRANTED HEREIN. THE MINNESOTA PUBLIC UTILITIES COMMISSION WILL ISSUE THE ORDER WHICH MAY ADOPT OR DIFFER FROM THE FOLLOWING RECOMMENDATION.

Based on the Findings of Fact, Conclusions, and the record, the Administrative Law Judge makes the Recommendations set forth above in this Report.

Dated: April 22, 2010

s/Richard C. Luis
RICHARD C. LUIS
Administrative Law Judge

Recorded: Janet Shaddix and Associates
Transcripts Prepared

[705] Applicants' Proposed Findings of Fact, Conclusions and Recommendation, filed 02/16/10, Doc. Id. 20102-47095-09.

NOTICE

Under the PUC's Rules of Practice and Procedure, Minn. R. 7829.0100 to 7829.3200, exceptions to this Report, if any, by any party adversely affected must be filed within 15 days of the mailing date hereof with the Executive Secretary of the PUC, 350 Metro Square Building, 121 Seventh Place East, St. Paul, Minnesota 55101-2147. Exceptions must be specific, relevant to the matters at issue in this proceeding, and stated and numbered separately. Proposed Findings of Fact, Conclusions, and Order should be included, and copies thereof served upon all parties.

The PUC shall make its determination on the applications for the Certificate of Need and Route Permits after expiration of the period to file Exceptions as set forth above, or after oral argument, if such is requested and had in this matter. In accordance with Minn. R. 4400.1900, the PUC shall make a final decision on the Route Permits within 60 days after receipt of this Report.

Notice is hereby given that the PUC may accept, modify, condition, or reject this Report of the Administrative Law Judges and that this Report has no legal effect unless expressly adopted by the PUC.

Attachment 1

Oral Testimony at the Public Hearings

Well over 1,500 people attended the 17 public hearings held in eight different Minnesota communities along the Modified Preferred Route and the Alternate Route between November 30 and December 28, 2009.[706] A large number of those in attendance offered oral testimony during these proceedings. These Findings summarize many of the significant comments offered during the public hearings. The Administrative Law Judge regrets that he has not summarized everyone's testimony, but much of the testimony offered repeats or is similar in substance to that presented below. The remarks of everyone were heard, read, and considered carefully by the Administrative Law Judge.

Granite Falls

In Granite Falls, most of the commentators expressed concern about the Applicants' plan for a 345 kV line connecting Marshall and Granite Falls. This line would run between the Lyon County Substation and the proposed Hazel Creek Substation in Yellow Medicine County near Granite Falls.

Cheryl Rude and others stated their opposition to one of the Route Alternatives, which would run along the right of way of State Highway 23 approaching Granite Falls from the southwest. It was noted by Ms. Rude that the proposal (2B-01), would traverse an area crowded by another power line, the right of way for a railroad, and the vicinity of airport runways near Granite Falls. Applicants' spokesman, Craig Poorker, Land Rights Manager for Great River Energy, agreed that following this portion of Highway 23 was not a good alternative.

Kathy Torke appeared at Granite Falls and noted that the preferred route between the Lyon County Substation and the Minnesota Valley Substation at Granite Falls (which would connect with the new Hazel Creek Substation) contains more than twice the number of homes within 500 feet of the proposed transmission line, compared to the route she proposes. Her proposal was to follow Highway 23 between the communities of Cottonwood and Hanley Falls (the southern part of Route 2B-01), and then follow the preferred route leading to the existing Minnesota Valley Substation.

In response to Ms. Torke, Mr. Poorker pointed out that the Applicants had not looked at Highway 23 as part of their route application. He noted that the Applicants' intent was to follow an existing 115 kV line out of the Lyon County Substation, which line would be removed from service in connection with the building of the 345 kV line proposed. He also noted that the Applicants have selected an area in the proposed

[706] *See* Attachment 2.

"Hazel Creek Substation South Area" for construction of the substation that would connect to the Minnesota Valley Substation at Granite Falls.

Mr. Poorker pointed out that the Applicants are required by the Certificate of Need to connect through a proposed Hazel Creek Substation, on the way to the Minnesota Valley Substation. As a result, the Applicants believe that running the proposed 345 kV line along Highway 23 is not a possibility in the immediate Granite Falls vicinity.

Steven Prahl, a resident of Brown County, appeared at the evening hearing in Granite Falls. Mr. Prahl's house and farm lie one mile east of the Brown-Redwood County Line. The originally-designated Preferred Route runs 54 feet from his house, or 120 feet away if the line is constructed on the other side of the road running by his property. Either way, "It's right over the top of you."[707]

Mr. Prahl's suggestion, which is to place the Preferred Route away from his house along a line indicated as Alternative 3P-04, has been accepted by the Applicants as part of their "Modified Preferred Route."[708]

Paul Sheggeby spoke in favor of the Highway 23 proposal at the hearing. Mr. Sheggeby submitted a written comment on January 14, 2010, that noted the Hightway 23 approach was too close to the airport for placement of an HVTL. Instead, Mr. Sheggeby supported the Alternative Route running north of Hanley Falls to 260th Avenue, then proceeding to either the Preferred or Alternative route where they intersect. Mr. Sheggeby contended that this approach had a limited impact on landowners because it followed "natural field boundaries."[709]

Marshall

Speakers at the afternoon and evening sessions in Marshall were concerned with a variety of issues, including assurance that the preferred route stayed away from the community of Ghent, several miles northwest of Marshall on State Highway 68. One of the alternative routes (1P-02) would skirt the southern boundary of Ghent, and a number of people were interested in avoiding such a result. Also in Marshall, accusations were made against the Staff of the Office of Energy Security, Minnesota Department of Commerce, that Staff had misled residents in two different Lyon County Townships about the formation of advisory task forces (ATFs).[710] There also was concern regarding routing near the City of Lynd, southwest of Marshall, and various

[707] Granite Falls Evening Transcript at 43.

[708] *See* Finding 57. As used in this Report, the terms "Preferred Route" and "Modified Preferred Route" are interchangeable.

[709] Sheggeby Comment, January 14, 2010.

[710] In response to the allegations of having misled people, the OES e-filed Exhibit 43 on December 22, 2009. ID #200912-45333.

individuals expressed concern because of the proximity of their properties to either the Preferred or Alternate Routes.

Dawn Vlaminck, from Ghent, Minnesota, a community several miles northwest of Marshall on State Highway 68, spoke on behalf of many of the citizens of the community. Ms. Vlaminck is Ghent's City Administrator. She filed Public Exhibit 303, a seven-page-long statement with Appendices or Additions, maps, photographs and diagrams, on behalf of the City government. The City of Ghent is opposed to Route Alternative 1P-02, which would skirt the south and east edges of the city in Section 15 of Grandview Township, Lyon County. Many of the citizens of Ghent are opposed to such a routing of the Project, as opposed to the Modified Preferred Route, which would proceed two miles north of the city along 340th Street (the Lyon-Yellow Medicine County line). Future prospects for the City of Ghent to grow occur in the east and south vicinities of the city, because landowners north of the city are reluctant to sell their properties.

The Applicants noted that they find alternative 1P-02 to be inferior because it has more permanent wetland impacts, impacts more Wildlife Management Areas, and is closer to the City of Ghent, which limits the City's expansion.

Ordell Seaverson expressed an opinion shared by many rural-farm residents living along the Proposed Route, in stating that "It seems like they're avoiding wildlife areas more than they're avoiding people. I don't think that's quite right."[711]

Daniel Wambeke appeared in Marshall, and later at Lakeville. Mr. Wambeke lives in Section 1 of Fairview Township, at the corner where the Applicants' Modified Preferred Route turns south from 340th Street, and travels in that southerly line to 290th Street. Another transmission line, carrying 115kV and owned by East River Electric, currently runs across the road from the Wambeke farm. Mr. Wambeke requests that the proposed 345kV line be placed on the west side of the existing 115kV line. Mr. Wambeke pointed out that there is no house on the west side of the road opposite his residence.

If the Applicants place the Project's poles on the opposite side of the road from the Wambeke residence, the Applicants will work with those landowners on precise pole placement in an effort to mitigate effects on access by farm equipment, with a view to minimizing any impeding of their farming operations.

Mr. Wambeke also expressed a desire that the Applicants avoid a Wildlife Management Area lying north of his vicinity.

Deb Johnson is the clerk of Nordland Township, Lyon County, and her residence would be impacted if alternative 1P-02 is selected. Ms. Johnson, along with many people in the Marshall vicinity, was concerned because she never received (to her

[711] Marshall Afternoon Transcript at 38.

knowledge) a copy of Exhibit 21, which is a Notice from the Office of Energy Security to the effect that her residence may be affected by one of the routes (Alternative 1P-02 in this case) that was selected for further study during the scoping process undertaken by the OES.

The Affidavit of Mailing that accompanies the Notice to Landowners who potentially may be impacted by the Project indicates that Ms. Johnson was mailed the appropriate Notice at her last known address, but, like many in the Marshall area, Ms. Johnson has no recollection of receiving that mailing.

Ms. Johnson also does not recall receiving mailing of the Notice discussed above in her capacity as Clerk of Nordland Township.

Deb Johnson's husband, Kevin Johnson, notes that in addition to himself and Deb Johnson, there are eight or ten people he knows that live on the route within three miles of him who also have not received the Notice in question, which was mailed on September 18, 2009.[712]

Galen Boerboom and several other witnesses at Marshall, both in the afternoon and evening, expressed concern that Advisory Task Forces (ATFs) were not formed in the Marshall area. The witnesses contend that they requested to have ATFs established for two Townships in Lyon County, Westerheim and Grandview.

Mr. Boerboom alleges that the township clerks in Westerheim and Grandview Townships assembled and sent to the OES all the appropriate documentation needed to establish ATFs. Mr. Boerboom is concerned that the allegation of the OES to the effect that it mailed Notice of the possible effect of Alternative 1P-02 on local residents is a "lie", because OES lied earlier to residents of Westerheim and Grandview townships, in representing falsely to them that the Public Utilities Commission would form Advisory Task Forces for their area(s) because they had assembled properly all of the documentation necessary for the formation of ATFs.

The Administrative Law Judge finds that the concerns expressed above by officials and residents of the Marshall area, specifically people from Westerheim and Grandview Townships, is misplaced. The OES's response to the accusations that they lied or made misrepresentations establishes that Advisory Task Force applications from the two Townships in question were never completed properly or lacked the required written support of certain officials, so it was appropriate for the Public Utilities Commission to reject any Petition to form them.[713] The record does not establish any false representations on the pat of OES officials.

Dee Lisnetski has started a Petition related to concerns surrounding the Project, because "people are worried about the increased health risk, risk to livestock, stray

[712] Marshall Afternoon Transcript at 71.

[713] *See* Ex. 43, Hamel Memorandum and Affidavit of Scott Ek.

voltage, decreasing property values, and how living closely to this transmission line may impact their life."[714] During the Comment Period, Ms. Lisnetski filed her Petition, which was signed by 39 people.

The concerns expressed by Ms. Lisnetski, on behalf of her neighbors and herself in Lincoln County, are reflected by many public witnesses appearing throughout all of the hearings in this proceeding. Like many others, Ms. Lisnetski enriched the record with a number of documents (most retrieved from internet searches) highlighting alleged dangers of living by power lines. The Administrative Law Judge is urged by these witnesses to "take into account the studies and the findings . . . mentioned and the concerns of the people . . . that don't want this transmission line and the petition that also proves that."[715]

The Administrative Law Judge explained to many of the witnesses whose testimony was similar to that of Ms. Lisnetski that the issue of need for the Project had already been decided by the Public Utilities Commission. Many of the witnesses speaking about the alleged adverse health effects of transmission lines urged the Administrative Law Judge to recommend choosing an alternate route instead of a route that passes in their vicinity.

Ken Van Keulen, whose land is on the Preferred Route northwest of Marshall, noted that the Applicants have informed him that they will attempt to route the line around the residence and other buildings on his property, should the Preferred Route be chosen. This response is an example of one that many witnesses received at every location the hearings were held, that is, that the Applicants would do everything possible to mitigate any direct impact on human settlement along the line chosen for the Project.

Mr. Van Keulen also noted a concern about why the Applicants are not proposing to follow more "main thoroughfares" and "rights of way."[716] He suggests more use by the applicants of fence lines and ditch lines that are placed away from residences.

Specifically in response to Mr. Van Keulen, the Applicants' witness, Craig Poorker, explained that following the main thoroughfare in the area, State Highway 19, and also the railroad line in that part of western Minnesota, goes directly through too many cities, such that the applicants would have to "jog around every city that we came to."[717]

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[714] Marshall Afternoon Transcript at 99.

[715] Marshall Afternoon Transcript at 109-110.

[716] Marshall Afternoon Transcript at 139.

[717] Marshall Afternoon Transcript at 141.

On behalf of the Applicants, Mr. Poorker noted that they tried to follow roadways and in instances tried to follow fence lines as well with a focus to avoid residences as much as possible.[718]

Mr. Van Keulen also inquired about why one route is designated by the applicants as "Preferred" and the other as "Alternate." In response, Mr. Poorker explained that under the state law and rules, the Applicants have to declare at least two routes for a project of this nature, and have to declare also one of them Preferred and one of them Alternate. The Preferred Route was chosen because it is approximately 25 miles shorter than the Alternate Route, and when the Applicants balanced out all of the impacts to homes and all the other criteria, they concluded that the Preferred Route came out better than the route designated as the Alternate Route.[719]

During the afternoon hearing at Marshall, Craig Poorker noted that for two miles along the preferred route just north of Ghent, the Applicants' request that the route be widened to 2,600 feet (roughly the northern half of Section 3) in Grandview Township. This modification will allow the Applicants more flexibility in routing the project through property owned by Ken Van Keulen.

Mr. Dean Louwagie, a member of the Fairview Township Board, did not receive specific notice that alternative 1P-02, if accepted, would run within 500 feet of his house, which lies in Section 11. OES Staff (specifically, Scott Ek) explained that the only people who would have received word directly of the acceptance of Alternative 1P-02 during the Scoping Process would be those who initiated the proposal, in this case, the Board of Grandview Township.[720]

Mr. Poorker explained that when the company submitted a route request that was 1,000 feet wide, that route was intended to measure 500 feet either side of a section line or the center line of a roadway, for a total width of 1,000 feet. The applicants want the opportunity to work with landowners on where to actually spot poles and other utility equipment after a given route is selected by the Public Utilities Commission. Mr. Poorker explained further that any right-of-way acquired for the project would be 150 feet wide, 75 feet on each side of the centerline. The 150 foot wide right-of-way would be the width of the actual easement acquired from the property owner, if any. The Applicants will work with landowners to find specific locations for poles and other equipment while negotiating for easements with the landowners along the route chosen.[721]

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[718] Marshall Afternoon Transcript at 142.

[719] Marshall Afternoon Transcript at 143.

[720] It was clarified later that Alternative 1P-02 had the initial support of two individual Board Members from Grandview Township, not the support of the Board itself.

[721] Marshall Evening Transcript at 48.

Linda Stoddard is the neighbor across the road from Mr. Louwagie on Alternate Route 1P-02, and her house lies only 145 feet from the centerline of the road, so she would be affected even more greatly if that Alternative Route is designated for the Project.

Robert Blomme appeared at the evening hearing in Marshall, and expressed essentially the same concerns as Daniel Wambeke had that afternoon regarding the siting of the route. Mr. Blomme's mother has land in Sections 13 and 14 of Fairview Township, Lyon County, but the house is on the east side of the road in Section 13. The Applicants plan to route the line to the west side of the existing 115kV line owned by East River Cooperative.

Mike Pasquariello lives in the community of Lynd, which lies several miles southwest of Marshall on Highway 23. The community of Lynd lies along the Applicants' Alternate Route. If the Alternate Route is chosen, the various meanderings of the Redwood River would complicate siting of the 345kV line. Mr. Pasquariello's concern arises because certain maps distributed by the Applicants indicate the centerline of the Alternate Route passing near a development where he lives.

Mr. Poorker explained that the Applicants have applied for the maximum width to be authorized if the Alternate Route is chosen in the vicinity of Lynd, so that the Applicants would have a 1.25 mile-wide corridor in which to decide where to acquire right-of-way.[722] Mr. Poorker explained that the Project has no defined route through the area of Lynd near the various branches of the Redwood River, but that it has asked for a wider route because of the homes that are there, the presence of a golf course, and also because the river crossing(s) present extra challenges.

Bernard Louwagie owns property that could be affected by the Applicants' Modified Preferred Route, which land is already impacted by a small substation for East River Coop and a power line owned by Otter Tail Electric. Mr. Poorker explained that routing the Proposed Project in Mr. Louwagie's area to the west side of the 150kV line and owned by East Central should avoid the Bernard Louwagie residence, just as it does the residence of Daniel Wambeke.[723]

The East River Cooperative substation in question lies in the northeast quadrant of Section 25, Fairview Township in Lyon County.[724]

Redwood Falls

The Administrative Law Judge conducted public hearings in Redwood Falls on the afternoon and evening of December 2, 2009.

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[722] Marshall Evening Transcript at 70.

[723] Marshall Evening Transcript at 80.

[724] Marshall Evening Transcript at 83.

Tom Sterzinger of Taunton, Minnesota, in Lincoln County, appeared and raised concerns about health risks associated with high voltage transmission lines, including electromagnetic fields (EMF). Like other witnesses from Lincoln County who appeared in Marshall, Mr. Sterzinger and his spouse did extensive Internet research.

Dr. Peter Valberg, the Applicants' expert witness on the subject of the EMF generated by transmission lines, addressed Mr. Sterzinger's concerns from the Applicants' point of view.

Mr. Sterzinger owns most of Section 12 in Limestone Township, Lincoln County.

Alternate Route 1P-02 runs along the east side of Section 12, which is the Lincoln-Lyon County line. The north side of the Section is along the Applicants' Modified Preferred Route. Mr. Sterzinger is opposed to the Modified Preferred Route because there will be large power poles that he has to farm around. He also believes that his land will be devalued if the Project is approved along that Route. Mr. Sterzinger's primary concern with citing the 345 kV line on the Modified Preferred Route between Sections 1 and 12 of Limestone Township is that his wife is still of child-bearing age, and he believes that proximity to high voltage transmission lines can have an effect on pregnant women. Mr. Sterzinger is concerned that the data supplied by the Applicants is not accurate and people will be exposed to a degree greater than what is represented. He suggests underground burial of the 345 kV line when it would be run so close to peoples' residences.

Alternate Route 1P-01 is located along the west and north sides of Section 2, and the north side of Section 1 in Limestone Township. If this Alternate Route section is chosen the power line Project would be moved away from the area where Mr. Sterzinger lives and farms. He prefers that location because he would not have to farm around it or worry about the dangers of EMF to his wife and children. He also alleges he would not have to worry about any decreased value of his land because of the aesthetic effects of powers poles.

In a subsequent Finding in this Report, the Applicants express disfavor with Alternate Route 1P-01 because it does not use as much existing road right-of-way as the Modified Preferred Route.

Regarding the effects of electric and magnetic fields on residences that are close to high voltage transmission lines, Dr. Peter Valberg explained that there are currently no federal guidelines stating that homes should be placed within certain distances of high voltage transmission lines. Dr. Valberg pointed out also that sources of magnetic fields already exist in people's residences, and everybody is exposed to magnetic fields from wiring, grounding currents, and appliances. Regarding the study from the California Department of Health that looked at the issue of potential effects of high voltage transmission lines on pregnancy outcomes, Dr. Valberg cautions that one individual study does not, in fact, establish that an effect on pregnancy is actually

caused by transmission lines.[725] He points out that studies indicating that there may be such effects have not been validated over the course of time, and the State of California has no regulations as to particular levels or particular distances from power lines that have to be maintained resulting from such studies.

Dr. Valberg notes that human bodies are basically transparent to the effects of magnetic fields, so he concludes that the best science on the matter is that there is no effect on human bodies from such sources.[726]

Duane Anderson lives west of Morgan in Redwood County. His property lies 500 feet south of the Modified Preferred Route. Mr. Anderson's concerns are effect on property value, health issues, and aesthetics. Mr. Anderson supports the positions taken by Thomas Sterzinger in his earlier testimony on the afternoon of December 2 in Redwood Falls. Mr. Anderson posed the question to Dr. Valberg as to whether the Applicants' witness would purchase a home that was in the proximity of a high voltage transmission line, and Dr. Valberg that he would not hesitate to do so.[727]

Mr. Anderson prefers that the Project follow the Alternate Route in the vicinity of Redwood Falls and Redwood County, which Alternate Route crosses the Minnesota River at North Redwood Falls and proceeds through Renville County approximately 12 miles north of Morgan.

In response to Mr. Anderson's concerns about aesthetics, Applicants' witness Craig Poorker responded that the Project would use single-pole structures made from steel. They are somewhat weathered in appearance, or rusty colored, and sit on a concrete base roughly eight feet in diameter. Each pole would be about six feet in diameter, bolted to the top of a concrete base, and each would have a height of 135 to 175 feet. The poles would be placed roughly every thousand feet apart and would have four arms on each (including one shield arm).

In response to Mr. Anderson's concerns, Mr. Poorker pointed out that the Applicants will seek a wider route to cross the Minnesota River at North Redwood Falls if the Alternate Route is chosen, and also a wider route to cross the Minnesota River just south of Franklin at County Roads 3 (in Renville County) and 8 (in Brown County), southeast of the Redwood Falls-Morton area. Both Morton and Franklin lie north of the Minnesota River in Renville County.

At the afternoon hearing in Redwood Falls, David Seykora, Associate General Counsel of the Minnesota Department of Transportation (Mn/DOT), filed Public Exhibit 309, which is a Memorandum containing comments from Mn/DOT respecting the areas where the prospective routes in the Project would cross highway property that is owned

[725] Redwood Falls Afternoon Transcript at 52.

[726] Redwood Falls Afternoon Transcript at 54-55.

[727] Redwood Falls Afternoon Transcript at 71.

or administered by Mn/DOT. Mr. Seykora also explained what would be taken into consideration by Mn/DOT in issuing permits for crossing land that it owns or administers, such as the type of traffic and volume of traffic that travels over the roadway, the type of oversize vehicles that may use a highway, maintenance activities on highways and bridges, inspection schedules, and other details pertinent to the safety of the traveling public so that they do not come into contact with energized high voltage wires. Mn/DOT also hopes to assure that there is sufficient space so that various pieces of equipment can operate safely, and will also look at plans and projections for where additional highway work will be done in the future such as the addition of highway lanes or wider shoulders. In some cases, there may be plans to add overpasses or interchanges on some highways, and Mn/DOT does not want location of high voltage lines put in areas where they might need to be moved later.[728]

William Schwandt, and his son, Tyson Schwandt, appeared at the Redwood Falls Evening Hearing and indicated support for the CapX2020 project. In that connection, William Schwandt pointed out that Tyson Schwandt's house lies much closer to the center line of the Preferred Route along Section 10 in Three Lakes Township, Redwood County, than the Applicants believe. Mr. Poorker assured the Schwandts that the Applicants will make sure that all houses are outside of their 150-foot-wide easement at any point along the Project right-of-way.

Clint Gronau lives on a farm near Franklin, Renville County, in Camp Township, north of the proposed Minnesota River crossing from County Highway 8 in Brown County to County Highway 3 in Renville County. Mr. Gronau experiences shortness of breath and headaches whenever he is in the vicinity of a 115 kV transmission line that runs on or near his property.

Mr. Gronau recommends that the point where the Modified Preferred Route turns east (from north) along County Road 3 in Renville County be chosen so that the west-to-east portion be routed across farm fields and away from roads and all the farm residences that would be in the vicinity of the Projects' route, in order to mitigate any possible adverse effects on human health. It is his further preference for the CapX2020 Project 345 kV line to follow the Alternate Route running farther north across Renville County after crossing the Minnesota River at North Redwood Falls.

Mr. Poorker pointed out in response to Mr. Gronau's suggestion regarding the Minnesota River crossing between Brown County and Renville County, approximately eight miles southeast of the crossing of the Alternate Route at North Redwood Falls, that the crossing area is one where the Applicants varied from their 1,000-foot wide route corridor and made it wider, to approximately 1.25 miles, in order to allow flexibility about precisely where to cross the Minnesota River.

Dr. Peter Valberg responded to Mr. Gronau's evidence on health concerns. Dr. Valberg noted that he has been following the EMF controversy for a long period of time,

[728] Redwood Falls Afternoon Transcript at 105.

but is unable to add any concrete evidence regarding the headaches Mr. Gronau experiences when he is in the proximity of the 115 kV transmission line.

Winthrop

The Administrative Law Judge conducted public hearings at the Veterans Club in Winthrop during the afternoon and evening of December 3, 2009.

Diane and David Swedzinski from Milroy spoke in opposition to Alternative 3P-06. Alternative 3P-06 would proceed along the north and east sides of Section 36, in Underwood Township of Redwood County. The Applicants' Modified Preferred Route runs along the other two sides (west and south) of the Section. The Swedzinskis are opposed to either route.

The Swedzinskis are opposed to Alternative 3P-06 and the Modified Preferred Route because they would pass close to their house and another house in Section 36. They also are concerned about the fate of threatened and endangered species along the Route. They question also the Applicants' assertion that routing on Alternative 3P-06 would decrease the number of historical sites within one mile of the route.

In response to the Swedzinskis, Mr. Poorker of Great River Energy noted that Alternative 3P-06 is favored by the Applicants over the original Preferred Route, and has become part of the Modified Preferred Route. Mr. Poorker explained that Alternative 3P-06 takes two homes out of the 1000 foot-wide Preferred Route corridor.

The Swedzinskis are concerned also with their Internet service, which connects to a dish on their house that lines up with the elevator in Vesta, a nearby community. They are afraid their service will be compromised by the placement of power line poles. Mr. Poorker indicated that when the Applicants marked the center line on the Preferred Route, that it was placed at the locations shown for measurement purposes, and "by no means" indicates that that is where the center line is going to end up.[729] He noted that the Applicants could place the line, if that route is chosen, on either side of the road or anywhere within the 1000 foot corridor.

Mr. Poorker believes also that there would be no interference with Internet service to place an electric transmission line between the Swedzinskis' and the Vesta elevator.

The Swedzinskis challenge the Applicants' assertion that the north to south portion of Alternative 3P-06, which runs along the west side of the Section, follows field lines. They maintain that the Section line is in the middle of their field. They also dispute the Applicants' assertion that the 3P-06 Alternative avoids a wetland that would be on or close to the Preferred Route.

[729] Winthrop Afternoon Transcript at 42.

Mr. Swedzinski also submitted a written comment contending that the Applicants did not provide adequate support for their route selection, particularly for Segment 3P-06. He also maintained that the maps used by the Applicants contained many erroneous descriptions of land types. He suggested that the Applicants use National Cooperative Soil Survey maps. He also suggested that the routing should emphasize going through Reinvest In Minnnesota (RIM) agricultural land as this land is less valuable than prime farmland. He suggested that Applicants "start over" due to the inaccurate information relied on in the Application.[730]

Diane Swedzinski noted that Mr. Poorker has acknowledged that Applicants erred in alleging, among the reasons for choosing Alternative Segment 3P-06, that following that Alternative would avoid the habitat of endangered species and sites of historical significance.[731]

Donald Schuelke owns land and conducts farming operations along the Modified Preferred Route in Yellow Medicine County near Minneota. Mr. Schuelke prefers the Route to proceed into fields several hundred feet north of 340th Street (he lives on the south side). Mr. Poorker explained that the Applicants' intention was to site the line on the north side of 340th Street, opposite the Schuelke property, but that the Applicants will attempt to "stick close to road right-of-way."[732]

James Mayer is a member of the Board of Supervisors for Cornish Township in Sibley County, southwest of Winthrop. He is concerned about running the Project's 345 kV transmission line in the vicinity of other utilities, particularly a pipeline going through the vicinity. Another concern of Mr. Mayer is that the bottom half of a four-mile long north-south stretch south of Highway 19 is not covered by road but is fields for two miles, before turning east again on 320th Street. Mr. Mayer noted that even if the Preferred Route is built over the last two miles of fields along its north-south path in Cornish Township, and those fields are along field lines between farmers, that the poles would be placed on one side of the line or the other, so that somebody's land would be compromised for farming.

Mr. Mayer is concerned also about the possibility of an explosion if electrical transmission lines are placed in the vicinity of where drainage occurs from the pipeline, which is done periodically along a pipeline to alleviate pressure.

Devang Joshi from Great River Energy responded to Mr. Mayer's pipeline-related concern. Mr. Joshi stated that a large concern is that electrical shocks would be thrown off of and could harm persons in the vicinity of the pipeline. He stated the company will

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[730] Swedzinski Comment, January 29, 2010 (Doc. Id. 20101-46593-01)..

[731] Swedzinski Comment, January 15, 2010 (Doc. Id. 20101-46105-02); Poorker Letter, January 14, 2010 (Doc. Id. 20101-46243-01)..

[732] Winthrop Afternoon Transcript at 66.

work with the pipeline company (in this case, Hutchinson Gas) to avoid such consequences.[733]

Allen Messerli proposed a line for the Applicants' Crossover Route, which would follow a rail line running from Franklin, through Renville and Sibley Counties roughly southwest to northeast, and connecting with the Alternative Route as it runs along the north side of Arlington Township, Sibley County, and then onward to the Minnesota River crossing at Belle Plaine. As noted in earlier Findings, the Applicants proposed using a different Crossover Route. One major reason is that following the railroad would require the 345 kV transmission line to pass through several communities. Applicants want to avoid all of the problems involved with possible condemnation of land and moving of buildings that could occur in Franklin, Fairfax, Gibbon, Winthrop, Gaylord, and Arlington.

Duane Kamrath lives on Doppy Lane in Le Sueur, an area that could be in the direct line of the 345 kV transmission poles if the Applicants' Modified Preferred Route is adopted. He favors crossing the Minnesota River at Belle Plaine, avoiding Le Sueur altogether. He is concerned also about the environmental consequences of crossing the Minnesota River at Bucks Lake near Le Sueur, if the MPUC chooses a Le Sueur crossing. Mr. Kamrath suggests that the Modified Preferred Route be altered to avoid Highway 169 completely in the Le Sueur area, except for where it has to cross that road. He suggests following the Old Highway 169 route and County Road 28.[734]

Mr. Poorker responded to Mr. Kamrath by acknowledging that the Le Sueur area is an extremely challenging vicinity to determine a final route. For that reason, the Applicants have asked for authorization of an extra-wide area so that a number of alternatives can be evaluated.

If the Minnesota River is to be crossed at Le Sueur, rather than at Belle Plaine, Mr. Kamrath notes that Alternative 4P-04 is far enough south, below Bucks Lake and south of a sensitive heron rookery, such that the route would avoid any environmental impact on those areas.

Mr. Kamrath suggested crossing Highway 169 alternatively at the point where County Road 28 joins with Commerce Street in Le Sueur. Routing along County Road 28 would avoid interfering with the view that people on Doppy Lane enjoy of the Minnesota River Valley as it drops down in elevation along Highway 169 from a ridge on the north side of Le Sueur.

Mr. Kamrath later withdrew his alternative route proposals for Option 3 (County Road 28, presented first at Henderson) and Option 5 (Modified Myrick Street, presented first at New Prague) in favor of the Belle Plaine crossing. Mr. Kamrath cited the impact on the scenic easement held by MN/DOT and the impact on the wooded area near the

[733] Winthrop Afternoon Transcript at 80.

[734] Winthrop Afternoon Transcript at 111-129.

Green Giant sign as the reason for avoiding the Le Sueur crossing option. A number of persons from Le Sueur signed the letter expressing this position.[735]

Vera Hahn appeared in the evening proceeding at Winthrop and related her allegations that the proximity of power lines to human settlement can cause difficult consequences. She believes her cancer was caused by nearby power lines and related an anecdote that televisions near power lines will automatically turn on if the power passing through the transmission lines increases.

Kelly Baggenstoss maintained that dairy cattle production is affected by the proximity of transmission lines.

Loni Lund offered testimony regarding the Minnesota River crossing between Brown and Renville Counties southeast of Redwood Falls (along the Modified Preferred Route). He noted concern over the crop spraying done on his land every year, because any new transmission line would also be in the area of a pre-existing line. He also was concerned about the issue of stray voltage. Mr. Poorker, on behalf of the Applicants, noted that Mr. Lund's house is approximately 1000 feet from the center line of the Proposed Modified Preferred Route, which would run along the west side of the County Road after crossing the Minnesota River.

Mr. Lund spoke against choosing Alternatives 4P-01 or 4P-02, as opposed to the Modified Preferred Route, for corridors traveling to the east off Renville County Road 3 as it runs north-south from the Minnesota River crossing. His concern is that either one of those lines would "box him in" if the eastern direction did not start along Highway 19. Mr. Poorker noted that the Applicants did not advance, nor do they favor, either Alternative 4P-01 or 4P-02.[736]

Leon Lang lives southwest of Winthrop, in Section 10 of Cornish Township, Sibley County. Mr. Lang, whose house and property would be impacted on the south side if Alternative 4P-01 is selected (it would run along County Highway 25 in that vicinity) spoke against acceptance of that Alternative.

Henderson

Afternoon and evening hearings were conducted in Henderson on December 7, 2009. A number of witnesses testified regarding the proposed crossings of the Minnesota River at Le Sueur (Modified Preferred Route) or Belle Plaine (Alternative Route and Crossover Route).[737] Much concern was expressed regarding the effect of

[735] Kamrath Comments, January 12, 2010 (Doc. Id. 20101-46568-02).

[736] Winthrop Evening Transcript at 81.

[737] The Crossover Route starts in Sibley County, proceeding North twelve miles to join the Alternate Route, which it follows all the way to the Project's eastern end at Hampton. Except where a distinction is obvious from the context, for purposes of this portion of the Report, the terms "Alternate Route" and "Crossover Route" are interchangeable.

any aerial crossing by the 345 kV transmission line because of the potential impact on birds that use the Minnesota River Valley as flyways, resting spots, roosting and breeding areas, and for hunting smaller creatures and fish, if the bird specifies in question are predators.

Cornish Township Supervisor James Mayer, who appeared originally in Winthrop, also appeared in Henderson and expressed concern over the difficulties involved for farm operations to continue around or in the vicinity of power poles. He also went into greater detail than he had previously regarding his concern about co-location possibilities (which he does not favor) for the Applicants' Preferred Route and the pipeline in Cornish Township.

Alvin Mueller owns a family farm in Section 5 of Arlington Township in Sibley County. His testimony expressed concerns about the portion of the Applicants' Proposed Crossover Route connecting their Modified Preferred and Alternate Routes.

Specifically, Mr. Mueller commented on what is referred to in the record as the "US Fish and Wildlife Service (USFWS), Minnesota Department of Natural Resources" (MDNR) Alternate Route. Mr. Mueller notes that that specific proposal would have a detrimental and adverse effect on the home farm and the farming operations undertaken on his land, as well as negative and unfavorable impacts on the overall environment in the area. Mr. Mueller has his land enrolled in the Conservation Reserve Program (CRP), and also portions of his property are Designated Wetland Areas affected by the High Island Creek system, which provides habitat for many wildlife species including pheasants, turkeys, deer and song birds.

Mr. Mueller notes also that there is a natural gas pipeline right-of-way across his farm, constructed several years ago, traveling in a northwest to southeast direction. Applicants' witness Craig Poorker noted that the newest version of the Applicants' Crossover Route is actually approximately 1.5 miles west of the United States Fish and Wildlife Service route that concerns Mr. Mueller. The Applicants made the shift 1.5 miles to the west in the Crossover Route because they too were worried about waterfowl migration and interference with the large wetland complex lying northwest of Mr. Mueller's property.

Duane Kamrath, who appeared first in Winthrop, also came to the Henderson proceedings, this time with his wife, Grace Kamrath. Mr. Kamrath prefers crossing the Minnesota River at Belle Plaine, and prefers the Crossover Route advanced by Alan Messerli at Winthrop, which would follow the rail line from Franklin to its connection with the Alternate Route northeast of Arlington.

If it is necessary to proceed along the Applicants' Modified Preferred Route crossing the Minnesota River somewhere at Le Sueur, Mr. Kamrath offered a third option for such a crossing and routing through that community. The first option is the original Preferred Route. The second is to follow Alternative 4P-04, including portions of County Road 28 (Old Highway 169). Mr. Kamrath's third option would avoid placing power poles along the four-lane corridor of Highway 169 as it slopes downhill at

Le Sueur past the Green Giant sign. His third option also would avoid the 20 homes in the Doppy Lane and Woods Drive areas in the northern part of Le Sueur. Option three crosses Highway 169 400 feet southwest of Highway 93 where 93 intersects with Highway 169. It follows the same line as Option two but diverts at the point where Option two continues to follow the four-lane highway, and comes closer to downtown Le Sueur. Option three from Mr. Kamrath would run south of Le Sueur Creek. The Kamrath Option three goes through a valley lying south of the Doppy Lane area, and there are no houses in the valley. After following the path of County Road 28 in the valley behind the Green Giant sign, Mr. Kamrath's proposed Option three route would reattach to the Preferred Route on the southeast side of Highway 169 south of the Minnesota River Valley rest area.[738]

Mr. Kamrath believes that his route Option number three helps avoid Bucks Lake and the herons and eagles in that area of the Minnesota River, by crossing to the south of it. Mr. Kamrath estimates that the transmission lines in his newest proposal would cross the Minnesota River about one mile from the southern most point of Bucks Lake. As it travels through Le Sueur after crossing the Minnesota River, along County Road 28, Mr. Kamrath's proposed route Option number three would be in the valley, where the view of the poles would be shielded from the Doppy Lane/Woods Drive neighborhoods by the ridge north of the valley and south of Doppy Lane.

Karen Hammel, counsel for the Office of Energy Security, is concerned that people affected by Mr. Kamrath's Option three, particularly the Petersons, had not yet received notice of his proposal.

Grace Kamrath noted that, on a clear day, people living in the Doppy Lane/Woods Drive area of Le Sueur can see from their position on the top of the ridge down across the three-mile view past the Green Giant sign and beyond that, to the spire of the Gustavus Adolphus College Chapel in St. Peter, approximately ten miles away. She introduced to the record several photographs illustrating the view from the Kamrath's back porch.[739]

David Seykora of Mn/DOT identified the areas where the Minnesota Department of Transportation has acquired for land for scenic easement purposes in the Le Sueur vicinity. He also noted that Scenic Area Order Number 40049 protects a corridor along the side of Highway 169 leading downhill and including the area of the "iconic sign of the Green Giant."[740]

Mr. Kamrath later withdrew his alternative route proposals in favor of the Belle Plaine crossing. Mr. Kamrath cited the impact on the scenic easement held by MN/DOT and the impact on the wooded area near the Green Giant sign as the reason for

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[738] Public Exhibit 312; Winthrop Afternoon Transcript at 86.

[739] Exs. 314-317. Henderson Afternoon Transcript at 106.

[740] Henderson Afternoon Transcript at 116-117.

avoiding the Le Sueur crossing option. A number of persons from Le Sueur signed the letter expressing this position.[741]

Delores Hagen spoke on behalf of Henderson Feathers, a birding group based in Henderson that is concerned with bird life and habitat in the Minnesota River Corridor, specifically the 12-mile "Henderson/Le Sueur Recovery Zone." Ms. Hagen noted the area is home to beautiful terrain and wildlife, flora, fauna, and many varieties of avian creatures. She also presented copies for the record of letters to Public Utilities Commission Chair, David Boyd, from officials of the USFWS. Ms. Hagen interprets the United States Fish and Wildlife Service's position, stated in its April 30, 2009 letter[742] as advocating non-aerial crossings of the Minnesota River, whether at Le Sueur or at Belle Plaine.

Steve Coman, representing RES Specialty Pyrotechnics, a fireworks manufacturer, appeared at Henderson and urged the Commission to route the Preferred Route around his company's property in Le Sueur County.[743]

Mr. Coman noted that officials of Applicant Great River Energy had visited with him and acknowledged that they were not aware of the existence of the RES facility at the time they prepared their Preferred Route. After that, the Applicants' Modified Preferred Route was adjusted to run at least 1000 feet away from RES's explosive magazines. The Applicants presented the realignment sought by RES in Mr. Poorker's Rebuttal Testimony.

Irene Casey owns land in Sections 22 and 23 of Tyrone Township, Le Sueur County, that would be crossed by the Applicants' Modified Preferred Route. Ms. Casey's concerns are multiplied by the fact that she already has an overhead power line on her western boundary, and an underground power line in the same vicinity.[744]

Fourteen-year-old Savannah Zippel made an impassioned plea to preserve the bird life in the Henderson vicinity along the Minnesota River, south to Le Sueur. Ms. Zippel moved to the Henderson vicinity from the Twin Cities, and it is at Henderson where she had her first experience observing eagles.

At the evening hearing in Henderson, the Administrative Law Judge read into the record a letter handed in late that afternoon by an official of the City of Le Sueur. In the letter, Mayor Robert Oberle stated that the City of Le Sueur agrees with the decision to upgrade the electric transmission system reflected in the Certificate of Need docket for CapX 2020. The mayor noted also:

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[741] Kamrath Comment, January 29, 2010.

[742] Public Exhibit 322.

[743] Henderson Afternoon Transcript at 134-144.

[744] Henderson Afternoon Transcript at 149.

> One, the City of Le Sueur recognizes that Bucks Lake has significant value in terms of natural habitat for natural wildlife.[745]

The City recommends that Bucks Lake be excluded from the Preferred Route proposed by the Project. The City's second point regards a 69 kV transmission line in proximity to the proposed Project in Le Sueur, which transmission line is owned by the City and runs from west to east from the Rush River area and the community of Le Sueur. The City is willing to cooperate with CapX 2020 officials to provide the use of the City's existing transmission corridor/easement to help mitigate the impact of the proposed Project on numerous properties. In addition, at the area where the proposed Project runs parallel with north Highway 169, the City recommends that the Preferred Route be located south of that Highway to mitigate the impact on Woods Subdivision and other residential properties in the vicinity. Mayor Oberle's letter points out also that the City of Le Sueur owns a large tract of property (Mayo Park) on the south side of the highway and is willing to make that park available to the Project's developers as a possible modification to the Project's Preferred Route.[746]

Mayor Oberle's offer regarding the route crossing at Le Sueur (making property in Mayo Park available) was clarified by his comment letter of January 6, 2010. Mayor Oberle reiterated that the City of Le Sueur favored the Belle Plaine crossing and the Mayo Park option was suggested only because the Preferred Route crossing of the Minnesota River at Le Sueur had been described as inevitable.[747]

Molly Boisen owns property along County Road 28 in Derrynane Township, Le Sueur County, that may be impacted by the Modified Preferred Route or by any of the alternatives 4B-01, 4B-02 or 4B-04 suggested in the vicinity. Mr. Pooker, on behalf of the Applicants, pointed out that neither alternative for 4B-01 nor 4B-02 are favored by the Applicants. He believes they were offered during the scoping process as possible connectors between the preferred and alternate routes.

Scott Ek of the OES staff noted that routes 4B-01 and 4B-04 were suggested during the scoping process by the Lake Marion-Hampton Advisory Task Force.

Linda Rist, in addition to expressing her concern for preserving the natural character of the Minnesota River Valley, both for ascetic purposes and as well life habitat, pointed out that much of the area near where the Modified Preferred Route would cross in the Le Sueur vicinity, including the Mayo Park area, is subject to frequent flooding.

Lori Ammann, who lives near Sections 24 and 25 of Henderson Township in Sibley County, was concerned about Electromagnetic Field (EMF) effects if the Modified

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[745] Henderson Evening Transcript at 23.

[746] Public Exhibit 327.

[747] Oberle Comment, January 6, 2010 (Doc. Id. 20101-46568-02).

Preferred Route is chosen and the Project is constructed near her area. Mr. Pooker acknowledged that, if the Modified Preferred Route is chosen, the construction could occur in the vicinity of the Ammanns. Dr. Peter Valverg, on behalf of the Applicants, responded to Ms. Ammann's concerns regarding EMF hazards.

Molly Fixsen asked Mr. Pooker whether the power poles to be constructed along the Project could withstand an F-5 Class tornado. Mr. Pooker responded with "It would take something much more catastrophic than that to make those poles actually tip over."[748]

Pat Jostad, who lives in Kelso Township, Sibley County, which is an area traversed by the Modified Preferred Route, urges that the Project avoid construction in the Rush River area, which is the western edge remnant of the "Big Woods" hardwood forest that used to spread across the entire eastern half of the United States, until meeting up with the Great Plains.[749] Mr. Jostad also urged the Applicants to take care to avoid old Indian Mounds in the area.

Shirley Katzenmeyer lives on a farm and wildlife area in Tyrone Township, Le Sueur County, with her husband Mark Katzenmeyer. They are concerned about any proposals that would route the CapX 2020 345 kV transmission line along Myrick Street, which is their road. Their property is one of the largest rest areas in the region for wildlife and migratory waterfowl, and much of their land is registered in a Conservation Reserve Program. The Katzenmeyers urged strong consideration to crossing the river at Belle Plaine, rather than the Modified Preferred Route through Le Sueur and County Road 28, which is a migratory flyway.

Mr. Wayne Bohlke, a retired executive of a Fortune 500 company, who lives in the Le Sueur area, is concerned about line loss. He noted that his repeated request for specific data regarding how much energy is lost along the length of the CapX 2020 proposed Brookings to Hampton line has elicited no response, as of the time of the hearings in Henderson. Mr. Bohlke was perplexed he had received no response because the Applicants, when they do respond, would then have to disclose data that "would not be conducive to this line going through at all".[750]

Kelly Baggenstoss and Vera Hahn, who also appeared earlier at Winthrop, expressed their concerns at the evening hearing in Henderson regarding the dangers of proximity to power lines being connected to cancer.

Darick Schultz expressed concern about the crossing by the alternate and Crossover Routes coming south into Scott County from Belle Plaine and their possible proximity to a crude oil pipeline (MinnCan). At the point of possible junction, the

[748] Henderson Evening Transcript at 119.

[749] Henderson Evening Transcript at 122.

[750] Henderson Evening Transcript at 144.

pipeline is buried approximately six to eight feet underground. Mr. Pooker indicated that the Applicants would make efforts to drain current away from any pipelines that the 345 kV transmission line crosses or parallels.[751]

Mr. Schultz favors following the Alternate Route all the way from the Minnesota River crossing to the Hampton Substation. It was noted also that the MinnCan pipeline, at the point it crosses the Minnesota River near Belle Plaine, is buried underground.

Roger Juse expressed concern about stray voltage, which was responded to by Pam Rasmussen of Xcel Energy and Davang Joshi of Great River, as well as Applicants' expert Dr. Peter Valverg. In that connection, Mr. Pooker noted that the maximum sag expected in any of the 345 kV wires extending between the Project's poles would be to an above-ground altitude of 37 feet. Mr. Pooker acknowledged that anyone working with a large crane in the vicinity of such sagging wires would be exposed to electrocution hazards.[752]

James Sameulson, a Belle Plaine resident who is employed as a construction union official, believes that powerlines will not destroy eagles, or transmit cancer. He also does not believe that there is any danger of putting electric powerlines in the vicinity of gas or oil pipelines, because such pipelines get ground resistance that takes away any problem that may be caused by EMF or stray voltage.[753]

Duane Kamrath expressed concern with the proposal by the City of Le Sueur, as stated in the letter from Mayor Oberle, because the proposal would allow the placement of power lines along and parallel to Highway 169. To alleviate that issue, Mr. Kamrath suggests using the south side of Mayo Park, closer to Route 28, to minimize encroachment of power poles in the more scenic areas along Highway 169.

The City of Le Sueur's offer to have the Modified Preferred Route run along the same corridor as the 69 kV line that serves the Le Sueur Municipal Electric Utility was placed on the record for the first time at the Henderson Public Hearing.[754]

Lonsdale

The Administrative Law Judge conducted afternoon and evening hearings at the American Legion Hall in Lonsdale on December 8, 2009.

Delores Salaba, and her husband Clarence Salaba, appeared at Lonsdale and presented written remarks filed on behalf of Margaret and Elmer Vikla.[755] The Salabas

[751] Henderson Evening Transcript at 164.

[752] Henderson Evening Transcript at 178.

[753] Henderson Evening Transcript at 184.

[754] Testimony of Scott Ek, Henderson Evening Transcript at 199.

[755] Public Ex. 340.

offered testimony regarding several variations of the Applicants' Alternate Route in Le Sueur and Rice Counties. The Salabas live in Wheatland Township, Rice County.

The Salaba's home, along 60th Street in Wheatland Township, was on the Applicants' originally-designated Alternate Route, and also is near Alternative 5A-03, which also runs through Wheatland Township and continues farther to the east. The Applicants do not favor acceptance of any of the three altneratives near the Salaba home, 5A-01, 5A-02, or 5A-03.

The testimony of Delores Salaba went into great detail regarding a number of the effects that siting a 345 kV power line along the Alternate Route or any of the "5A" alternative alignments would affect, including one individual who has colonies of honey bees on their land. Many of the houses along the "5A" alternatives are extremely close to the center line of any right-of-way the Applicants may acquire if any of those alternatives are selected. Snowmobiling along trails in the area near Independence Avenue may also be impacted. Ms. Salaba also pointed out the possible impacting of a herd of bison that are kept in the vicinity and also an area where natural gas is vented from a pipeline in the vicinity.

Clarence Salaba was a member of an Advisory Task Force, and he is concerned about the extra expense if the Alternate Route is chosen, and that there would be much more damage done to humans, wildlife and nature if the Alternate Route is chosen in their portion of Rice County.

Paul Entinger lives in Section 13 of Lanesburg Township, Le Sueur County, which is the section of land just across Independence Avenue from the Salabas. He shares with the Salabas similar concerns about the quality of human life, and effects on the environment and nature if either the Alternate Route, or Alternates 5A-01, 5A-02, or 5A-03 are selected. Similar concerns are shared by Edwin and Marian Topic and Jerry Minar, who also farm in that general vicinity near the Le Sueur-Rice County line.

Mr. Paul Entinger is a member of the Lanesburg Township Board of Supervisors. Clarence Salaba is clerk of the Wheatland Township Board.

As a member of the Task Force studying route alternatives in the Le Sueur-Rice County area, Mr. Salaba was frustrated by the experience because, even though the majority of the Task Force did not favor Alternative 5A-03, he recalls the Task Force was not allowed to vote on the various alternatives by the facilitator appointed by the Office of Energy Security.

Marian and Edwin Topic were not informed of the existence of Alternates 5A-01 or 5A-03 until approximately two weeks before the Lonsdale proceeding. However, they were notified in September 2009 of the possibility that their land could be affected.[756]

[756] OES Ex. 21.

Delores Salaba is concerned about the "numerous" people who have said they did not get the mailings the OES alleges were sent to them. She notes that if a person receives a letter telling them a power line is coming on their farm, or right past the front door, they would remember having received it because it makes the kind of impact over which people lose sleep.[757]

Edwin Topic noted that, if Alternative 5A-03 is selected, the line would go straight across his fields and also cut through a portion of the original "Big Woods" remnant in that Section of Lanesburg Township.

Duane Boyle, who lives in Webster Township of Rice County, is opposed to Route Alternative 5A-04, which runs along 50th Street in Webster Township. Alternative 5A-04 runs approximately 4.5 miles from west to east (to Interstate Highway 35) across the north sides of Sections 13, 14, 15, 16, and 17 in Webster Township. It is parallel to a portion of the Applicants' Alternate Route, which runs parallel to 5A-04 along 57th Street west approximately 3/4 of a mile to the south.

Mr. Boyle also is against either the Alternate Route or Alternative 5P-04. He favors selection of the Modified Preferred Route as it runs through the eastern portion of Scott County, south of Cedar Lake and through Cedar Lake and New Market Townships. Mr. Boyle disputes the allegation that there are fewer houses along Alternate 5A-04 (50th Street) for the 4.5 mile length in question, than there are along the parallel portion of 57th Street.

Mr. Boyle and his neighbors have planted over 4,000 trees and shrubs along the 50th Street corridor, which would be disrupted if Alternate 5A-04 is selected. The wildlife area about which he is concerned is habitat for numerous creatures (raptors, ducks and geese, herons, egrets, pheasants, and turkeys).

Mr. Boyle is also concerned because selection of Alternative 5A-04 would bring a 345 kV transmission line that much closer to a private airfield in the Webster vicinity, known as Sky Harbor Airpark. Sky Harbor is home to approximately 70 aircraft that are used frequently for training private pilots, helicopters, low-flying balloons, medical evacuation helicopters and aircraft that is chartered for use by law enforcement agencies in the vicinity. The Airpark is located near the middle of Section 10, Webster Township, Rice County.

In response to Mr. Boyle's concerns about Sky Harbor Airpark, Craig Poorker of Great River Energy responded that the proximity to Sky Harbor is a major reason why the Applicants do not like Alternative 5A-04.[758]

Roger Tupy owns and operates a certified organic farm northeast of New Prague in Cedar Lake Township, Scott County. Mr. Tupy already has the MinnCan crude oil

[757] Lonsdale Afternoon Transcript at 100.

[758] Lonsdale Afternoon Transcript at 134.

pipeline buried underneath his property, which lies along the Applicants' Preferred Route. Mr. Tupy has difficulty with the fact that the selection of a Preferred and Alternate Route by the Applicants has created a north (Scott County) versus south (Le Sueur and Rice Counties) division among residents in the general area between New Prague and Interstate Highway 35.

Hilary Scheffler lives and farms along County Road 2 in Wheatland Township, Rice County. Mr. Scheffler pointed out that he and a number of other people live along the Applicants' designated Alternate Route, a number of them very close to the potential right-of-way for the 345 kV transmission line.[759]

Nancy Johnson owns farmland in Sections 13 and 14 of Wheatland Township, Rice County, north and east of the community of Lonsdale. The Applicants' Alternate Route runs along the southern edges of those two Sections. The Johnsons raise buffalo, and little is known about the effect of a high voltage transmission line being constructed and operated in the midst of the bison species. If the Alternate Route is constructed where proposed, the 345 kV transmission line would cut through open fields where Ms. Johnson's buffalo are raised.

Linnea Hautman lives along one of the "5A" Alternatives near the Le Sueur-Rice County line. The center line proposed along Alternate 5A-03, would pass 89 feet from Ms. Hautman's house and garage in Section 18 of Wheatland Township. Ms. Hautman is especially concerned about the effect that a high voltage transmission line might have on her husband's insulin pump. The Hautmans built their house in the middle of a stand of the Big Woods in order to assure themselves of quiet and privacy, but now are concerned about possible electric shocks and buzzing noises from the operation of high voltage power lines.

Applicants' witness Craig Poorker responded to Ms. Hautman that the Applicants would work closely with the manufacturer of her husband's insulin pump, as they do with manufacturers of implants on other people impacted by the proximity of a high voltage transmission line, so that all are informed of the possibilities of the situation. However, Mr. Poorker emphasizes that the Applicants do not favor Alternative 5A-03. One reason the Applicants are against 5A-03 is because it would sever the pristine woodland lying along that Alternate Route.

Delores Salaba noted that the individuals who suggested Alternative 5A-03 did so with a view to avoiding the vicinity of the City of Lonsdale, which lies two to three miles east of the Big Woods area of concern. While it is true that Alternative 5A-03 would move the 345 kV transmission line one mile farther away from the built-up portion of Lonsdale, it is noted also that the Alternate Route (Rice County Highway 2) is separated from the housing in Lonsdale by a high ridge.

[759] Lonsdale Afternoon Transcript at 152.

Howard Braith lives in Section 24 of Lanesburg Township, Le Sueur County, and he is concerned about adverse conditions such as cancer for people living in the proximity of high voltage power lines. Mr. Braith will be extremely close to the Applicants' 345 kV line if Alternative 5A-01 is adopted.

In partial response to Mr. Braith, Dr. Peter Valberg noted that the electric lines will be configured in such a way that both the electric fields and magnetic fields cancel each other to some degree, and will not be doubled in size with a double-circuit design.[760]

Mr. Braith is concerned that any power line constructed by the applicants would interfere with the business of his auto repair shop, which he fears may be directly underneath the line.

Gary Morrison made his own (late) Alternate Route proposal at the Lonsdale Evening hearing, which is to proceed along Independence Avenue approximately three miles farther north than the point where the Alternative Route turns to the east, northward to County Road 3, and then turn east to Interstate Highway 35. Mr. Morrison believes that his suggestion would alleviate concerns about being too close to the Sky Harbor Airpark, which is a primary concern for him. He also advocates burial of the 345 kV transmission line proposed by the Applicants.

Applicants' witness Craig Poorker agrees that the Applicants are opposed to approval of Alternate 5A-04 because of its proximity to Sky Harbor. Mr. Poorker is unaware of a 345 kV transmission line being buried anywhere in the State of Minnesota. A line of that capacity is difficult to bury, and is extremely expensive to maintain.

David Vikla lives along the proposed 5A-03 Alternative Route. Mr. Vikla is opposed to adoption of that route because it would cut through his "Big Woods" property, where his family has not allowed any logging, so as not to disturb the plants and animals found living in his area of Rice County. Mr. Vikla entered into the record a series of greeting cards, on which he drew delicately detailed images of various birds found in his woods.

Roy Fuhrmann and Michael Balfany (along with his wife, Anastasia Balfany, and his children, Anna and Connor Balfany) all live in the vicinity of the Sky Harbor Airpark, and do not want the flight patterns in the area to be disrupted by a power line, as would happen if Alternative 5A-04 is accepted as an alternate route through Webster Township, Rice County. Mr. Fuhrmann believes that the Applicants' Alternate Route may also be out of compliance with Federal Aviation Administration (FAA) Regulations because of its relative proximity to Sky Harbor Airpark.

Michael Balfany, a retired United State Air Force Lieutenant Colonel, is against the placement of any CapX 2020 Segment 5 alternate routes through northern Rice

[760] Lonsdale Evening Transcript at 33.

County.[761] He believes that the Draft Environmental Impact Statement indicates very clearly that the alternate routes in northern Rice County disturb vastly more wetland and wildlife habitat, as well as critical archeological and historically relevant architectural sites, as opposed to the Modified Preferred and Alternate Routes. He notes that in addition to the 70 aircraft at Webster's Sky Harbor Airpark, there is a cluster of 52 houses. Mr. Balfany, who flew fighter jets for sixteen years, pointed out that if airplanes landing at Sky Harbor follow FAA protocol and rules, they will be dangerously close to the power lines if they are routed on Alternative 5A-04 as they drop in altitude to approach the runway. Mr. Balfany also believes that the Applicants' alternate route is also dangerous for the same reason, but that "5A-04 is probably slightly more dangerous."[762]

Applicants' witness Craig Poorker responded that the Applicants would work with the FAA to lower the height of any power poles in the vicinity of Sky Harbor Airpark, if that route is chosen by the Public Utilities Commission.

Anna Balfany related her experience of being in a rural area that is also in the vicinity of a small private airport (Sky Harbor) she recalls a hot air balloon landing in one of the Balfany's fields, which would have created a possibly-deadly incident if a power line had been in the way. She noted that she and her brother, Connor, would have to wait right underneath the power lines for their school bus if Alternative 5P-04 is chosen.

Anastasia Balfany spoke of how the Balfanys and their neighbors take pride that they live in an area that is rich in natural beauty and a haven for wildlife and outdoor enthusiasts. This lifestyle would be disrupted greatly by the introduction of a 345 kV transmission line in the area, in the opinion of Mrs. Balfany.

Connor Balfany addressed his concerns about damage to the environment and adverse aesthetic effects, if a power line is constructed in the vicinity of Sky Harbor Airpark. He urged locating the 345 kV line along a highway right-of-way.

James and Roberta Meehan have a 185 acre farm in Henderson Township of Sibley County. The Modified Preferred Route would traverse their land.[763] Mr. Meehan offered the Applicants specific routing advice as (if) the Modified Preferred Route in their vicinity is selected.[764]

On behalf of the Applicants, Mr. Poorker responded that the area about which the Meehans are concerned is one in which the Applicants understand there are a variety of center line options, so they have asked for a wider route corridor through that territory, of 1 mile to 1.25 miles in width.

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[761] Lonsdale Evening Transcript at 78.

[762] Lonsdale Evening Transcript at 98.

[763] Lonsdale Evening Transcript at 124.

[764] Lonsdale Evening Transcript at 130.

Ms. Roberta Meehan added to the detailed testimony offered by her husband, with further details about where power poles could be placed in the vicinity, where the topography is complicated by Minnesota River bluffs and ravines.

Cindy Helmberger of Lakeville offered her opinion that high voltage transmission lines should follow existing rights-of-way, particularly and specifically along State Highway 19. She also stated it was extremely unfair if people live near power lines but do not have land specifically that would be crossed, yet they "lose out on the value of their property" because of the aesthetic effects but "don't get any kind of compensation."[765]

Cal Schumacher is concerned because of the proximity of his wife's daycare operation to one of the proposed routes. The concern is that families might not want to send their children for daycare to a house that is next to a power line, so the business operated by his wife may suffer. The Schumachers live in Section 23 of Cedar Lake Township, which is along the Modified Preferred Route (a part of Scott County Highway 2).

Tim Kretchmer lives in Derrynane Township in Le Sueur County, at the point where the Alternate and Crossover Route turn east from the Helena Substation South area. Mr. Kretchmer does not favor that routing of the Alternate Route, but he is even more opposed to Alternative 5A-02, running north of the Alternate Route, which at that point is known also as 300th Street. Alternative 5A-02, which is not favored by the Applicants because it would impact more homes than the parallel stretch of the alternate route, and runs closer to the town of Heidelberg, was proposed by a person along the Modified Preferred Route who operates a daycare business. Alternative 5A-02 also adds length to the route and significant cost because of corner structures that would have to be erected.

Larry Coffing operates an organic dairy farm that lies along proposed Alternate Route 5A-04 in Webster Township. Mr. Coffing is concerned about being compensated for any damage to dairy cattle exposed to magnetic fields. Pam Rasmussen of Xcel Energy explained that stray voltage is caused by either improper wiring on the farm or by issues with how the distribution system is constructed, and the transmission lines do not directly cause stray voltage because they are not grounded at each pole (they are grounded at the substations along the route).[766] Ms. Rasmussen noted that electric milking machines, such as those used by Mr. Coffing, create their own magnetic fields. Mr. Coffing related an anecdote about a personal friend in the Jordan, Minnesota, area who has a "high power line" running a quarter mile from his farm, to the effect that when the power lines operate during certain peak times of the day "his cows are starting dancing in the barn. He'd be milking them, they would be fine. Then all of a sudden,

[765] Lonsdale Evening Transcript at 146.

[766] Lonsdale Evening Transcript at 187.

they start dancing around."[767] Ms. Rasmussen urged Mr. Coffing to work with his local utility to help solve the problem, and stated that Xcel will do the same.

Lakeville

The Administrative Law Judge conducted afternoon and evening hearings at the Holiday Inn-Lakeville South on December 10, 2009, and a morning proceeding (that lasted until mid-afternoon) at the same location on December 11, 2009.

The City of Elko New Market was represented at the afternoon hearing in Lakeville by Richard Revering and Mark Nagel, and is opposed to Route Alternative 5P-03, which would proceed (east to west) along County Road 2 through Elko New Market from Interstate Highway 35, approximately four miles, and another mile (across the bottom of Section 19 in New Market Township) and then uniting with the Preferred Route (which runs 1.5 miles north of 5P-03 before dropping south on the west sides of Sections 19 and 18) to proceed farther west through Cedar Lake Township and the rest of Scott County.[768] The city of Elko New Market is also concerned about the Applicants' alternate route, which it believes would affect adversely any development along I-35, particularly in the area of future interchange improvements that will be necessary to accommodate the growth they foresee.

Route Alternative 5A-03 would proceed directly through downtown Elko New Market, where there are many businesses and many more residences in the immediate vicinity than would be affected by the comparable east-west routing of the Applicant's Modified Preferred Route through Sections 14, 15, 16, 17, and 18 of New Market Township.

Mr. Revering noted that the Comprehensive Plan for Scott County and the Metropolitan Council contemplates that the City of Elko New Market will grow to a population of 20,000 in the year 2030 and ultimately to a population of 80,000.[769]

Applicants' witness Craig Poorker stated that the Applicants are against routing along Route Alternative 5P-03 because of all the complications around the situation of routing directly through the downtown of Elko New Market.

Cindy Helmberger suggested the Applicants consider the possibility of building along Alternative 5P-03, but placing the route underground in the actual downtown portion of the Elko New Market community. Mr. Revering and the City are opposed to such a plan because, wherever the line was not placed underground, the power poles would disrupt future growth along the same right-of-way (County Highway 2).

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[767] Lonsdale Evening Transcript at 189.

[768] Lakeville Afternoon Transcript at 35 (12/10/09).

[769] The present population of Elko New Market is around 3,800. Lakeville Afternoon Transcript at 53 (12/10/09).

Reid Johnson from Elko New Market believes that the situation could be resolved simply, by accepting the Alternate Route through Rice County.

Marlin Reinardy is the director of Public Works for the City of Hampton. On behalf of the City of Hampton, Mr. Reinardy urges construction of any power line to stay away from the west side of Highway 52 as it crosses through the City. Most of the homes in Hampton, as well as recreational facilities such as the town ballpark, are west of Highway 52, and would be less disturbed if the 345kV line was constructed east of Highway 52.

Mr. Reinardy's remarks are operative only if the Alternate Route is chosen by the Public Utilities Commission. The present population of Hampton is approximately 750 people.

Applicants' witness Craig Poorker pointed out that acceptance of Alternative 6P-08 would add approximately 20 miles to the Alternate Route which is already 25 miles longer than the Modified Preferred Route. He also pointed out that Alternative 6P-08 provides no connection to the Lake Marion Substation, in contravention of the terms of the Certificate of Need issued by the Public Utilities Commission.[770]

Cindy Helmberger pointed out that Scott County has zoning provisions that allows for more density of population in rural areas than does Rice County. She notes that the estimated market value of Cedar Lake and New Market Townships in Scott County is 1.25 billion dollars, whereas the estimated market value in the Rice County Townships of Webster and Wheatland total 583 million dollars.[771] Ms. Helmberger believes it is appropriate to route the new transmission line along Interstate Highway 35.

Roger Tupy noted that the farm three miles to the west of him along Scott County Road 2, owned by David and Florence Minar, is a certified organic dairy operation. The Minar property also, like Mr. Tupy's, lies along the modified preferred route in southern Scott County. The Minar property is in Helena Township.

Kristen Johnson (not related to parties Robert and Patricia Johnson) lives on Darsow Avenue, which is on the Applicants' Preferred Route for the 345kV transmission line. Ms. Johnson is in a house located 75 feet from the center line of the preferred route. She notes that the preferred route along Highway 50 – Darsow Avenue in the Hampton vicinity has 28 homes that will be impacted negatively from the Applicants' project, if the Modified Preferred Route is accepted in that vicinity. Ms. Johnson fears that her property value would tumble, and that there would be much additional noise from the power lines if the Modified Preferred Route is accepted through Hampton along Highway 50. Ms. Johnson advocates acceptance of Alternative Route 6P-06, which would run north of and roughly parallel to the Modified Preferred Route along Highway 50 in the Hampton area.

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[770] Lakeville Afternoon Transcript at 97 (12/10/09).

[771] Lakeville Afternoon Transcript at 107 (12-10-09).

Greg Entinger of rural New Prague lives approximately 50 feet away from the center line of the Applicants' Alternate Route in Le Sueur County. He asked questions of the Applicants about house displacement, if necessary, and the cost of power poles intended to be used for the Project. He noted also that farms are getting larger, so that the section lines within townships do not necessarily constitute property lines, as was more common in the past. Greg Entinger also asked for an estimate of comparable costs of burying power lines as compared to erecting power poles.

In partial response to Mr. Entinger, Mr. Poorker noted that "if we were to bury a 345kV transmission line, we would have to build a pretty significant structure where we go underground and again where we come back up."[772] He notes that the testimony of Applicants' witness Kevin Lennon addresses the point specifically, and the area involved for construction of a structure to service underground lines is approximately one acre, around 200 feet by 200 feet (40,000 square feet).

Mr. Entinger lives in Section 13 of Lanesburg Township, Le Sueur County. He is familiar with the area around the community of Lonsdale, specifically where the Modified Preferred Route comes to the corner of Rice County Road 2 and Independence Avenue, before turning north. Mr. Entinger lives along Alternate Route 5A-03, and he maintains that route, which runs one mile north of County Road 2, thus avoiding Lonsdale, in fact does no better job to avoid that community than the Alternate Route along Highway 2. This is so because the intersection of County Road 2 and Independence Avenue, where the Alternate Route would turn from east-west to north-south, is actually screened from all but approximately two residences in the community of Lonsdale because of a high ridge between the community and the County Road 2-Independence Avenue intersection.

Mr. Entinger raised questions on a variety of power line construction issues, such as earthen spoils in the areas that are excavated for placement of the poles, effects on GPS systems, damage to drainage tiles, and compaction of soil.

Theresa Ruhland lives on a farm that has been in her husband's family since 1892, and in a house that began construction in 1904. Ms. Ruhland owns property on both sides of State Highway 19, which is the border between Scott and Le Sueur Counties. In Le Sueur County, to the south, the Ruhland property is in Section 3 of Derrynane Township. In Scott County, their property is in Section 34 of Belle Plaine Township.

The north-south road that cuts through the Ruhland property, and through the centers of Section 34 in Belle Plaine Township and Section 3 in Derrynane Township, is known Fabor Avenue. As was pointed out by Mrs. Ruhland, Fabor Avenue has not been constructed in Le Sueur County, such that the route proposal would go through her fields at any place south of Highway 19. It is noted that the 345kV transmission line corridor from the middle of Section 10 in Derrynane Township, proceeding north through

[772] Lakeville Afternoon Hearing at 141 (12/10/09).

Section 34 of Belle Plaine Township, a distance of approximately 2.5 miles, is on all the Applicants' Modified, Preferred, and Crossover Routes (which proceed up from the south after coming across Le Sueur County from Le Sueur) and the Alternate Route, which has proceeded south from Belle Plaine. This common corridor, at its southern end, is the start of the Alternate/Crossover Routes which then proceed east to Hampton. The Preferred Route runs from south to north through the 2.5 mile corridor, and then proceeds east to Hampton by way of a Scott County route to Interstate Highway 35 and the Lake Marion Substation.

The Ruhland farm does have a very narrow unimproved field road that runs into the center of Section 3 of Derrynane Township south of Highway 19. However, the Modified Preferred, Crossover Route and Alternate Route along that half mile from Highway 19 south to the center of Section 3, do not use the field road. Instead they cross the Ruhlands' open fields. Also in Section 3, at the point where the Applicants plan to divert 1,000 feet to the east of RES Pyrotechnics, the Proposed Routes would run approximately 3,800 feet through the middle of the Ruhlands' fields before crossing into Scott County. Mrs. Ruhland wonders aloud "How can carving up our farm in such a fashion be the only route alternative?"[773]

Mrs. Ruhland pointed out also that another power line runs to the west of her property, so the CapX2020 Project would completely surround her farm by power lines.

Mrs. Ruhland suggests that the Applicants share the corridor already occupied 1,500 feet to the east of Fabor Avenue by another Xcel Energy transmission line. Mrs. Ruhland's suggested route, noted on the record as segment Alternative 4B-04, was determined by the Applicants to be inferior because it does not support the reliable operation of the transmission system due to the fact that it parallels an existing 345 kV line, impacts more agricultural lands, increases small forest impacts, and increases impacts to wetlands.

Parnell Mahowald is in Section 17 of New Market Township, along the Applicants' Modified Preferred Route in eastern Scott County. The Modified Preferred Route would go near Mr. Mahowald's house, and he is concerned about the health of his 80-year-old father, who needs a pacemaker for his heart. He notes also that there is a camp in the near vicinity for handicapped children, many of whom have heart pacemakers. Mr. Mahowald uttered the classic phrase "I don't want it in my backyard", in the context of stating that power line construction should stay on public rights-of-way such as county and state roads.[774]

Donald Pflaum lives in Section 1 of Eureka Township, near Alternate Route 6P-04. He is approximately 2.5 miles from the Airlake Airport at Lakeville. Mr. Pflaum noted that there is a large air traffic control center at the corner of 220th Street and Essex in Farmington, and that it may be hazardous to construct power lines near that

[773] Lakeville Afternoon Transcript at 182 (12/10/09).

[774] Lakeville Evening Transcript at 58 (12/10/09).

point. Mr. Pflaum also has bees on his land, and is concerned about the effect that routing of a power line would have on his center pivot irrigation system. He expressed concern also about the danger power line structures present to birds in flight.

In response to Mr. Pflaum, Mr. Poorker noted that alternate 6P-04 is one not favored by the Applicants because of the impact it would make on the Airlake Airport.

Nancy Sackett expressed concern about possible deleterious health effects on humans who are in the proximity of high voltage transmission lines, including possible effects of possible effects on people with autism and Asperger's disease.

Robert Johnson, and his wife, Patricia Johnson, live two miles west of Hampton on 220th Street East (Highway 50). Their residential property runs along the south side of 220th Street. Mr. Johnson believes the presence of power lines can have a large and negative impact on property values. He also is concerned about various possible negative health consequences, and noted that magnetic fields may harm people in different ways, such as increasing leukemia in children, Alzheimer's in adults, and possibly certain forms of breast cancer in women.[775]

Mr. Johnson estimated that any habitable property where transmission lines are closer than 200 feet can expect a market value discount of fifty percent or more.

It has been Mr. Johnson's observation that pivot irrigation systems indeed are able to operate underneath or in the immediate vicinity of 345 kV lines, this knowledge gained from his observation of a 345 kV line near Hampton that connects to Xcel's Prairie Island plant.[776] The Johnsons, who are parties to the evidentiary hearing in this matter, recommend and support Alternative Route 6P-06, which they believe is a practical route that would avoid many of the negative impacts on property values and significantly reduce the numbers of homes and special land uses affected adversely if the 345 kV transmission line is routed on 220th Street.[777]

Frank Carlson, who lives in Section 15 of New Market Township, suggests that the preferred route continue straight along the half section line of Sections 15 and 14 in New Market Township, into the Lake Marion substation area, rather than turn north one-quarter mile along County Road 91 before turning east to go through the two sections in question. The area suggested for adjustment through Sections 15 and 14 by Mr. Carlson is already occupied by a 69 kV transmission line.

Lynn Koch lives in Section 1 of Eureka Township, and advocates adoption of Alternatives 6P-05 and 6P-01, which would run north from the Lake Marion Substation to Highway 70, and proceed east from there several miles through the southern portion of the City of Lakeville. After traversing east for approximately five miles, the Route

[775] Lakeville Evening Transcript at 102 (12/10/09).

[776] Lakeville Evening Transcript at 108 (12/10/09).

[777] Lakeville Evening Transcript at 109 (12/10/09).

Alternatives split, with 6P-01 traveling along Highway 50 for the next four miles and 6P-05 traveling cross country to Dakota County Highway 74 (Denmark Avenue) just west of Farmington. At that point, 6P-05 drops south one mile to join the Applicants' Modified Preferred Route.

Ms. Koch notes that much of the right-of-way along Highway 70 is industrial, rather than residential, so that there is less disturbance with human settlement if 6P-01/6P-05 are accepted. In the vicinity of the Airlake Airport near Lakeville, Ms. Koch recommends burial of the line. Ms. Koch notes also that the Preferred Route, as it runs through Eureka Township, goes along a gravel road that traverses the property of people who chose to live a rural lifestyle. In summary, Ms. Koch emphasizes that she is "for 86th (Highway 70) and against 240th Street (the Applicants' Modified Preferred Route).[778]

In response to Ms. Koch, Craig Poorker noted that County Road 70 was not investigated by the Applicants because there is an existing transmission line already along its route. He reiterated his earlier remarks regarding staying away from Airlake Airport. Ms. Koch pointed out that most of the homes along Highway 70 were built after the industrial area was developed, so she believes those homeowners were aware of the situation.

Devang Joshi of Great River Energy responded to the effect that there already exists a 115 kV double-circuit transmission line along County Road 70. Mr. Joshi referred anyone concerned to the testimony of Kevin Lennon, where it is noted that the transmission corridor that would allow the build of a 345 kV transmission line would cause the line to be placed over the top of some of the buildings along Highway 70.

Daniel Wambeke appeared at Lakeville and entered documents designed to establish that the Townships of Westerheim and Grandview in Lyon County submitted all that was necessary for the establishment of an Advisory Task Force in their territory, including completed request forms from officials of each Township and an application from John Biren from the Lyon County Office of Zoning and Planning. Mr. Wambeke introduced also an application from Fairview Township in Lyon County.[779]

Testimony was heard from Jeff Otto, Chair of Dakota County's Eureka Township Board of Supervisors. Mr. Otto, and the Township Board, are most opposed to the 240th Street routing of the Applicants' Modified Preferred Route, which cuts through the center of Eureka Township. Mr. Otto and Eureka Township favor adoption of Alternative 6P-08, which goes east-west through Greenvale Township in Rice County. As it passes through Greenvale Township, alternative 6P-08 runs along 307th Street West for six miles, crosses east into Waterford Township (Rice County) for a short distance, and then turns north and east for 2.5 miles to the Alternate Route, which runs

[778] Lakeville Evening Transcript at 141 (12/10/09).

[779] *See* Exhibit 43.

parallel to and one-half mile south of County Road 86. County Road 86 is Alternative 6A-04 at that point.

Mr. Otto and the Eureka Township Board fear that development of a power line moving across Eureka Township from east to west two miles south of the Township's northern border, that is along the Modified Preferred Route or 340th Street, would lead to further development and possible annexation of portions of the Township by communities such as Lakeville.[780]

In response to Mr. Otto, counsel for the Applicants, Lisa Agrimonti, noted that the Certificate of Need granted for the CapX 2020 Project requires a connection at the existing Lake Marion Substation but the 6P-08 alternative does not include such a connection, so the Applicants believe that alternative 6P-08 is not viable.

Wayne Tonsager lives in Section 15 of New Market Township, Scott County. At the point where the Modified Preferred Route turns north along the western edge of Section 15, it also would cross a northern natural gas pipeline, and this confluence is on Mr. Tonsager's property and the property of his neighbor. Mr. Tonsager maintains that the buildings owned by himself and his neighbor, and a small wetland in the vicinity, will block development of a 345 kV transmission line along the ¼ - mile path that the Applicants intend to travel to move away from an existing 69 kV transmission line. In order to accomplish moving the 345 kV transmission line ¼ - mile north and ½ - mile east through Section 15, the Applicants will have to construct several corner poles, which are extremely expensive, and would disrupt Mr. Tonsager's view and property.

Mr. Tonsager already has a 70-foot-high Xcel power line crossing his property, and the noise from the current flowing through those wires is disturbing, so he cannot imagine how much noise would be generated by a 345 kV line.

Mr. Tonsager notes that County Road 91, which runs north and south past Section 15 of New Market Township, is a zoning boundary within Scott County. Property to the west of County Road 91 requires one house every eight acres if a large of piece of property is developed, whereas property on the east side of the road is zoned for one house every 2.5 acres.

Mr. Poorker, in response to Mr. Tonsager, pointed out that the route width requested by the Applicant in that particular area through Sections 15 and 14 in New Market Township is 3,000 feet wide, in order to allow the Applicants to pursue the routing challenges in the area, including the challenges posed by Mr. Tonsager in his testimony. In some cases, the Applicants recognize that they may have to acquire certain buildings if the center line of their ultimate right-of-way comes within 75 feet of such buildings.

[780] Lakeville Evening Transcript at 166 (12/10/09).

Patricia Johnson, one of the parties to the evidentiary hearing in this proceeding, noted that 64 adults and 14 children lived along the Modified Preferred Route on 220th Street or Highway 50 in Hampton. Six of the adults have, or are in remission from, cancer, another four adults and one child have chronic illnesses that have compromised their immune systems, and two adults have pacemakers and defibrillators. At three of the residences, grandparents provide daycare to their grandchildren, and one of the houses is a home daycare that usually has six to eight children under the age of six every working day.[781]

Ed O'Brien lives in Section 18 of Eureka Township, which is traversed on its south and center portions by the Applicants' Modified Preferred Route, as that Route proceeds east from the Lake Marion Substation. The Modified Preferred Route will run across the south and eastern ends of Mr. O'Brien's property, coming within 200 feet of his house.[782] Mr. O'Brien prefers that the power line be constructed off his land.

Karen Priebe, a past mayor of Hampton, appeared at the Lakeville hearing on December 11, 2009. Ms. Priebe's property is along the Alternate Route, and she urges CapX2020 to proceed along either Option 6P-04 or 6P-05 as they construct the transmission line through the city limits of Hampton.

Kim Purdon lives in Section 24 of New Market Township, Scott County, south of the Lake Marion Substation. She lives near the Alternate Route as it travels south from the Lake Marion Substation. Ms. Purdon cautions the Applicants to be aware that the Master Plan of Scott County for the year 2030 includes the widening of several roads in the Elko New Market vicinity, including County Road 2. Ms. Purdon introduced to the record a Resolution from the Board of County Commissioners for Scott County, which Resolution (2009-059, Adopted April 7, 2009) opposes the proposed routes for the CapX2020 transmission line project, and recommends a new Alternate Route running from the Minnesota River crossing at Le Sueur, along the Modified Preferred Route to Derrynane Township, Le Sueur County, and then along the Alternate Route from Derrynane Township, Le Sueur County to the Hampton Substation.[783]

Dan Callahan owns land in Section 22 of Derrynane Township, Le Sueur County. Mr. Callahan's farm is about a mile north of County Road 28, on County Road 32 near where the Helena Substation South, if that substation location is chosen, will be constructed. Mr. Callahan hopes that the northern routes, through Scott County, will be chosen for the construction of the CapX2020 line, which would include crossing the Minnesota River at Belle Plaine and following the Alternate Route from that point.

Joel Helmberger, a New Market Township Supervisor, appeared at the December 11 hearing in Lakeville. He described his experience as a member of the

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[781] Lakeville Transcript (12/11/09) at 34.

[782] Lakeville Transcript (12/11/09) at 53.

[783] Public Exhibit 367.

Lake Marion-Hampton Advisory Task Force. At the beginning of the third meeting of the ATF, Mr. Helmberger had polled members and believed he had at least 12 of the 17 present willing to recommend following the Applicants' Alternate Route from Helena Substation South, across Rice County, through Dakota County to the Hampton Substation. He is extremely frustrated with the way the third meeting was "altered" by the facilitator, in a manner designed, he believes, to foil the efforts of the majority of the Task Force members behind the Alternate Route.[784]

The route for which Mr. Helmberger testified he had assembled approval of 12 members of the ATF includes following Alternative 5A-03 in order to avoid Lonsdale, but basically followed the Applicants' Alternate Route except for that.

Mr. Helmberger also raised the possibility of developing a substation where the Alternate Route reached the vicinity of Interstate Highway 35 in Section 23 of Webster Township in the ATF proceedings, which would have made more feasible the possibility of running a line along what became Alternative 6P-08, but that plan was also foiled.[785] Mr. Helmberger favors adoption of the Applicants' Alternate Route, among the options still available for choice. He points out that the Applicants' Preferred Route, as it runs through New Market Township, mostly goes across fields and uses very little highway right-of-way. He also produced data establishing that the Townships of New Market and Cedar Lake in Scott County have double the population and have considerably more land value than the Townships of Wheatland and Webster in Rice County.

Mandy Urness lives in Section 14 of New Market Township, and the Modified Preferred Route would pass directly in front of her house. She is concerned about health effects and the diminution of her property value if the Modified Preferred Route is adopted in that area.

Math Sirek appeared at the December 11 hearing in Lakeville and related that he has been told by his doctors that he should avoid living next to power lines. Mr. Sirek lives on Scott County Highway 2 in Section 28 of Cedar Lake Township. An existing power line goes between his house and County Road 2.

Ray Kaufenberg lives in Section 18 of Eureka Township, Dakota County. He is concerned about property land values, impact on the environment, impact on the Vermillion River system and creeks, aesthetics and electromagnetic fields. He notes also that any power line would disrupt farming and the raising of livestock and horses, and also would impact cultural values in an area. Mr. Kaufenberg notes that the Preferred Route would go past the only residential development in Eureka Township (Eureka Estates).

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[784] Lakeville Transcript (12/11/09) at 31.

[785] Lakeville Transcript (12/11/09) at 42.

Because of the many impacts Mr. Kaufenberg believes the project will have, he suggests a re-routing to Alternative 6P-01. He also suggests considering Route Alternatives 6P-04 or 6P-05.

Mr. Kaufenberg suggests following the Alternate Route south out of Lake Marion Substation to 280th Street West in Scott County, then east into Dakota County along the same road, nominated as County Road 86 in Dakota County. He believes the wide road and better construction conditions that exist along Highway 86 would be better for power line construction than the Preferred Route, which would run along a gravel road further north in Eureka Township. Mr. Kaufenberg noted also that the Preferred Route makes approximately 17 turns, which are all very costly to construct on power poles, between the Lake Marion and Hampton Substations, whereas the Alternate Route would have only two turns if Alternate 6A-04 is chosen, or three if the Applicants' Alternate Route is followed.

Mr. Kaufenberg recommends also, that if a substation is built farther south from the Lake Marion Substation, in Webster Township near Highway I-35, that a routing using Alternative 6P-08 would also be feasible.

Ray Kaufenberg went into great detail with descriptions regarding the properties along County Road 9 (Dodd Boulevard) near the western end of the Alternate Preferred Route between Lake Marion and Hampton Substations, describing the potential impacts on all of them.[786]

Mr. Kaufenberg believes the Dodd Boulevard situation could be mitigated in part if Alternative 6P-07 is chosen as a shorter path between the Lake Marion substation and Dodd Boulevard than that followed by the Modified Preferred Route. He notes that the residences indicated along 245th Street (north of Alternate 6P-07) are built in such a way that they do not look at the street and thus the power line would not be visible from the front areas of those houses.

Mr. Kaufenberg also takes issue with some of the Applicants' data regarding how many homes would be impacted by the Preferred and Alternate Routes, the amount of mileage and percentage of existing right-of-way on the Preferred versus the Alternate Route, and the comparative number of acres that would be impacted by constructing the Alternate Route, compared to the Preferred Route between Lake Marion and Hampton.

Ray Kaufenberg criticizes the OES for hiring a professional facilitator who drove through a "very tight regimented agenda that did not allow for free and open input and discussion on issues" during the meetings of the Lake Marion to Hampton Advisory Task Force.[787] He went into detail regarding the segmenting of the ATF group to focus on specific, local possible routes, whereby the only "consensus" heard was that of the

[786] Lakeville Transcript (12/11/09) at 122.

[787] Lakeville Transcript (12/11/09) at 139.

individual small groups. Mr. Kaufenberg alleges that the professional facilitator did not allow for discussion or expansion on major issue topics.

New Prague

The New Prague hearings were scheduled initially for December 9, 2009, but were postponed until December 28th due to a blizzard. The Administrative Law Judge conducted the New Prague Public Hearings during the afternoon and evening of December 28, 2009, at the Knights of Columbus Hall in that community.

Wayne Bohlke, who appeared initially at Henderson and asked for line loss data from the Applicants, reported that he still had not received the data he had asked for. The Applicants responded that the data Mr. Bohlke was seeking was in a letter that had been mailed to him just recently.

Duane Kamrath appeared at New Prague. He presented another Option ("Modified Myrick Option 5) for routing of the 345 kV transmission line through Le Sueur, which utilizes Myrick Street as a portion of the corridor. In presenting his latest Option for the record, Mr. Kamrath emphasizes that he prefers that the transmission line cross the Minnesota River at Belle Plaine, but if it must cross at Le Sueur he prefers his earlier-offered "Option 3". Under Mr. Kamrath's final option, he reaches Myrick Street more directly than with any of the Options offered earlier by himself or the Applicants.

During the final public comment period, Mr. Kamrath withdrew his "Modified Myrick Number 5" Option. That Option was different than the Myrick Street Option presented in Mr. Poorker's supplemental testimony.

In New Prague, Applicants' spokesperson Craig Poorker noted that Mr. Kamrath's proposal involves using territory that is outside the original, expanded corridor space the Applicants have applied for in the Le Sueur vicinity.

Delores Hagen appeared in New Prague and presented a package of letters and environmental information, including a Petition urging no crossing of the Minnesota River at Le Sueur. The Petition, known also as the "Help Save Bucks Lake" Petition, was signed by 511 people (267 handwritten, 244 electronically.)[788]

One main difference between the Myrick Street alternative offered earlier by the Applicants and the one introduced by Mr. Kamrath on December 28 is that the Applicants' proposal would run the 345 kV line for more length along Highway 169. Mr. Kamrath urged his "Option 5", in part, because it crosses Highway 169 and moves away from its right-of-way immediately after the crossing. Before the Highway 169 crossing, Mr. Kamrath's proposal also would approach the 169 right-of-way directly.[789]

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[788] Public Exhibit 373 N.

[789] New Prague Afternoon Transcript at 60.

Randy Kubes introduced for the record the Scott County Comprehensive Plan for the year 2030, which he believes demonstrates that Scott County, which is already more densely populated along the Applicants' Preferred Route than the territory in Le Sueur and Rice Counties along the Alternate Route, plans for even further density in the southeast portion of the County, around Elko New Market.[790]

Robb Schoenbauer lives in an area northeast of New Prague, along County Highway 2, near the Applicants' Preferred Route. He pointed out that the Modified Preferred Route through Helena Township would cross six separate 40-acre parcels owned by his family, four of which are the same as already crossed by the MinnCan Crude Oil Pipeline.

Dave Hennen, who lives on Myrick Street in Le Sueur, opposes Mr. Kamrath's proposal for the Myrick Street route, which he said comes "absolutely out of the blue for everybody that lives on Myrick Street."[791]

Bob Altmann also lives on Myrick Street in Le Sueur, and he shares the concerns expressed by Dave Hennen. If a Myrick Street alternative is chosen, Mr. Hennen is concerned about disturbance of the soil along a portion of the proposed area for power line construction, which he emphasizes does not have tree cover and is not held together by a root system, making it highly susceptible to erosion.[792]

Irv Parker, who lives in the Farmington vicinity, appeared and expressed opposition to Alternative Routes 6P-03 and 6P-06. He urges routing of the Applicants' power line through Dakota County along established highway rights-of-way.

Jon Juenke farms in the vicinity of Hampton. His property would be disturbed by the Applicants' Modified Preferred Route along Highway 50, and also by Alternative 6P-03, as it runs through Section 35 of Castle Rock Township.

Steve Ruhland, son of Theresa Ruhland, pointed out that there is no road along the portion of the Ruhland's property proposed for a crossing by the CapX 2020 transmission line in Le Sueur County. The improved part of Fabor Avenue ends at the Scott-Le Sueur County line (State Highway 19). Mr. Ruhland believes that the 1,000-foot east option, to route around RES Pyrotechnics, is "unacceptable".[793]

Dave Minar, whose land is in Helena Township in the immediate proximity of the Modified Preferred Route along Scott County Highway 2, owns an organic dairy farm, known as Cedar Summit Farm. Cedar Summit markets its products extensively in the Twin Cities area. Mr. Minar is concerned about all the possible impacts the Applicants'

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[790] Public Exhibit 376; New Prague Afternoon Transcript at 69.

[791] New Prague Afternoon Transcript at 95.

[792] New Prague Afternoon Transcript at 102.

[793] New Prague Afternoon Transcript at 134.

proposal for a 345 kV transmission line would have on his dairy farm. Mr. Minar is concerned also about the possible disruption the Modified Preferred Route would make to the Sand Creek flood plain in Helena Township near County Road 2.

Shirley Gassman owns farm property in Section 26 of Lanesburg Township, Le Sueur County. Her property would be affected by the alternate route and Alternative 5P-02.

Jodi Prchal offered testimony regarding the impacts on her property and the property of a number of her neighbors, that would be made if the Applicants' Alternate Route is selected.

Charles Louis, who farms near Hampton, would have his irrigation pivots affected adversely if Alternatives 6P-03 or 6P-06 are selected. He prefers the Modified Preferred Route, which would keep the line along 220th Street through Hampton.[794]

Mr. Louis's opposition to Alternatives 6P-03 and 6P-06, noted in the preceding Finding, is shared by Steve Duff. Mr. Duff owns a number of bee colonies and is concerned about the possible effect on that part of his operations should a 345 kV power line be built nearby.

Mr. Duff's concerns are shared by his neighbor, Tim McNaughton, who breeds and raises Labrador retrievers.

Jeff Hancock represents Bimeda, Inc., an animal pharmaceutical manufacturing company, which has a production facility along Myrick Street in Le Sueur that employs 50 people. Bimeda, Inc., is opposed to the Myrick Street option, particularly because of the presence of isopropyl alcohol tanks on the property. Isopropyl alcohol is flammable and combustible, and Bimeda, Inc. does not want to be in the vicinity of a 345 kV transmission line that could cause a fire or explosion hazard if any stray voltage effects occur.

Roger Tupy stated that he was very disappointed in the task force process, and it appears to him that the decision makers in this matter already have their minds made up.[795]

Terra Lund presented further information on the possible impacts on the Sand Creek flood plain if the Modified Preferred Route is accepted. She presented detailed maps indicating errors in the data relied upon by the Applicants.[796] She also added further support for avoiding the Cedar Summit Dairy.

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[794] New Prague Afternoon Transcript at 176-177.

[795] New Prague Afternoon Transcript at 203.

[796] New Prague Afternoon Transcript at 208.

Theresa Ruhland appeared at the evening hearing in New Prague and described how stray voltage from power lines can affect cattle. She reiterated her concern about the incursion into her fields that would be caused by the diversion of the Routes to avoid the RES Pyrotechnics facility. Mrs. Ruhland is upset because she believes the Applicants could have planned appropriately to avoid RES if they had proceeded with their planning on that issue at the time she brought it to their attention in March and April of 2008.

In response to Theresa Ruhland, Mr. Poorker of Great River Energy noted that the Applicants are asking for a 1.25 mile-wide corridor in which to choose a final location for the joint Alternate/Modified Preferred and Crossover Routes that cross Mrs. Ruhland's farm properties. His testimony implied that the Applicants could choose to move anywhere in that 1.25 mile-wide band in a manner that best accommodates the land usage by the Ruhlands.[797]

David Seykora of Mn/DOT clarified some of his testimony that had been given in the Evidentiary Hearing held December 15 – 18, 2009, during which he was asked questions of a legal nature comparing Minnesota law to Wisconsin law and relating to procedures by which the Minnesota Public Utilities Commission directs or selects routes for high voltage transmission lines. Mr. Seykora clarified that the answers he gave at the Evidentiary Hearing were his own interpretation of the various laws, and that he was not stating an official position of the Minnesota Department of Transportation.

Shirley and Mark Katzenmeyer, who live along Myrick Street in Le Sueur, appeared the evening of December 28 in New Prague (Shirley Katzenmeyer appeared also in Henderson) to comment on the various alternatives for routing of the proposed 345 kV transmission line through Le Sueur, specifically along Myrick Street. The Katzenmeyers were particularly concerned by the Myrick Street alternative offered for the record by Duane Kamrath at the afternoon proceeding in New Prague. Under questioning by Ms. Overland, Mr. Poorker noted that there were no new land owners involved in the extra portion of land added to the Route in order to accommodate the Applicants' Myrick Street Alternative Alignment. He added that all of them had been notified earlier that their property could be chosen for the Project.[798]

Jan Rezac also owns land along Myrick Street in Le Sueur, and believes that the proposal offered by Mr. Kamrath would come right down the center of her property.[799] She added that she "just became aware of this and I was not previously told about this power line situation, so I was totally amazed at what was going on."[800]

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[797] New Prague Evening Transcript at 38.

[798] New Prague Evening Transcript at 59.

[799] New Prague Evening Transcript at 61.

[800] *Id.*

Karen Hammel, representing the Office of Energy Security, noted that the additional territory that would have to be added on the southern edge of the Applicants' proposed corridor for the Applicants' Myrick Street Alternative has not been studied, nor has it been commented upon in the Draft Environmental Impact Statement (DEIS) and, since any such alternatives involving Myrick Street were raised after the comment deadline for the Final EIS (FEIS), they would not have been studied by the Office of Energy Security.[801]

Christi Ryburn lives near the Preferred Route on County Highway 2. She is concerned about day care for her young children, and day care for many of the young children who are in families along the Modified Preferred/Crossover Route. There is one day care establishment in her vicinity, which is also close to the proposed location for the 345 kV transmission line, and Ms. Ryburn is concerned that the day care operation may be put out of business if the operator moves away from the power line or loses enough business because of her proximity to the power line.

Math Sirek lives along Scott County Highway 2, at a portion that would be impacted by the Modified Preferred/Crossover Route of the Applicants. He notes that Scott County is considering widening County Highway 2 to four lanes, so he fears the 75-foot-wide actual easement will come to a point where "my windowsill is going to be pretty close, won't it?"[802]

Bruce Polson lives in the northeast corner of Section 29, Cedar Lake Township, Scott County, which will be impacted directly if the Modified Preferred Route is selected. His main concern is the structural integrity of the poles for the proposed 345 kV transmission line.

Ed Townsend, appeared at New Prague to represent himself and the City of Belle Plaine. He introduced a resolution from the Belle Plaine City Council, which resolution states the City's opposition to the Alternate Route (also called the Crossover Route) for the Project, which would cross the Minnesota River in the vicinity of Belle Plaine.[803] Mr. Townsend served for ten years on the Planning and Zoning Commission of the City of Belle Plaine, and for ten years on its City Council.

Kim Howard owns Majestic Hills Ranch, the aforementioned horse ranch and day camp for handicapped children, north of County Highway 2 in New Market Township, Section 17. She is concerned about the effects of EMF from transmission lines on animals and on people with implants (pacemakers).

Roger Weiers lives along the Applicants' Modified Preferred/Crossover Route in Belle Plaine Township, Scott County, east of the area where the Route proceeds out of

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[801] New Prague Evening Transcript at 63.

[802] New Prague Evening Transcript at 126.

[803] Public Exhibits 401 - 402; New Prague Evening Transcript at 151.

the Helena Substation area. The line would proceed on 270th Street in Belle Plaine Township, which street is 150 feet from the Weiers's house.

Mr. Poorker clarified that, if a route is designated by the Commission to proceed near the Weiers's house, the Applicants would do what they can to avoid his residence, such as taking into consideration moving the power line poles on the opposite side of the road. Mr. Weiers noted that he would not have an objection if the power line was run an appropriate distance behind his house.[804]

Mr. Weiers noted that he has lived and farmed underneath power lines for 25 years, and that such lines crack and buzz continuously, particularly if the day is foggy or misty, which he finds unacceptable. He finds it ironic that his property would be protected more from the power line if he had a fish pond or cattails in his front yard, rather than his lawn.[805]

Joan Lucas and Jeff Docken, neighbors who live near Webster in Rice County, are concerned that the Alternate Route would pass through and disturb the native wetlands and large woods that lie in the area. Ms. Lucas noted that she is in support of the testimony of Mr. Docken and her other neighbors, farmers in the area, and people who wish to protect the Sky Harbor Airpark in Webster Township.

Kevin Fahey lives in Section 25, Faxon Township, Sibley County, across the Minnesota River from Belle Plaine. If the Alternate/Crossover Route is designated for the Applicants' 345 kV transmission corridor, Mr. Fahey's property will be surrounded on two sides by different transmission lines, the CapX 2020 Project and the existing line of the Minnesota Valley Electric Cooperative. In response, Mr. Poorker stated that, should the Crossover Route near Belle Plaine be selected, and the Project be routed near Mr. Fahey's property, the Applicants would work with Minnesota Valley Electric Cooperative and Mr. Fahey with respect to their concerns, and do their best to place the transmission line poles appropriately.

Written Comments from the Public

A large number of written comments were received from concerned members of the public, State and Federal agencies, and businesses. These comments addressed a variety of issues, almost all requesting that the route ultimately chosen be in a location away from the property of the commentator. Some of the public comments have been addressed in the Report where the issue raised is addressed. The summary provided here does not reference all of the comments received. The following Findings summarize the issues presented by the commentators, referencing some of the instances where the issues were raised.

[804] New Prague Evening Transcript at 160.

[805] New Prague Evening Transcript at 173.

The potential for adverse health effects from EMF/ELF, and to a lesser extent, stray voltage, is discussed in the findings on those topics as affecting health and safety. A large number of commentators raised this issue.[806]

Theresa Ruhland questioned the adequacy of the Agricultural Impact Mitigation Plan referenced in the FEIS regarding damages arising from HVTL maintenance. She urged that poles not be placed in the middle of agricultural fields to avoid damage to crops, drain tiles, and irrigation systems.[807]

Michael and Tracy Reese, owners and operators of the Eaglecrest K9 Resort, LLC (a dog boarding facility) expressed concern about the potential for impact to their business should the HVTL run along County Road 2 in Scott County, which is parallel to the dogs' play area.[808]

Joe Skluzacek expressed concern that the presence of current through the HVTL, if placed along his property line, would raise the risk of electric shocks when working with metal under the line.[809]

Tara Lund, a resident of New Prague along County Road 2 between Highway 21 and County Road 15 expressed her concerns that an HVTL on County Road 2 would disrupt and destroy natural waterways and wetlands through clear cutting the land and maintaining a service road underneath the lines. She expressed concern that a service road underneath the HVTL could impact the flow of Sand Creek during high water months and ultimately change the flood plain. She noted that about half of her 7.8 acres is already in the flood plain. Ms. Lund also expressed a concern that the Cedar Summit Organic Dairy Farm, which is an organic dairy farm producing pasturized milk,

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[806] Ruhland comment, February 8, 2010 (Doc. Id. 20102-46900-04); Ruhland Comment, February 11, 2010 (Doc. Id. 20102-47014-01); Ruhland Comment, January 22, 2010 (Doc. Id. 20101-46295-01); Rovenstine Comment, February 8, 2010 (Doc. Id. 20102-46952-03); Schumacher Comment, February 8, 2010 (Doc. Id. 20102-46952-03); Simones Comment, February 8, 2010 (Doc. Id. 20102-46952-03); Hutchinson Comment, February 8, 2010 (Doc. Id. 20102-46900-06); Maas Comment, February 8, 2010 (Doc. Id. 20102-46900-06); Markell Comment, February 8, 2010 (Doc. Id. 20102-46900-06); Markell comment, February 2, 2010 (Doc. Id. 20102-46900-02); Johnson Comment, February 8, 2010 (Doc. Id. 20102-46900-07); Kubes Comment, February 8, 2010 (Doc. Id. 20102-46900-07); Longtin Comment, February 7, 2010 (Doc. Id. 20102-46900-07); Roe Comment, February 8, 2010 (Doc. Id. 20102-46900-07); Hoy Comment, February 8, 2010 (Doc. Id. 20102-46900-03); Albrecht Comment, February 8, 2010 (Doc. Id. 20102-46900-03); Shell Comment, February 3, 2010 (Doc. Id. 20102-46790-01); Jacoby Comment, January 29, 2010 (Doc. Id. 20101-46593-01); Ozment Comment, January 22, 2010 (Doc. Id. 20101-46485-01); Kruger Comments, January 23, 2010 (Doc. Id. 20101-46433-03); Howard Comment, January 26, 2010 (Doc. Id. 20101-46433-01); Johnson Comment, January 23, 2010 (Doc. Id. 20101-46433-02); Enggren Comment, January 26, 2010 (Doc. Id. 20101-46433-02); Benham Comment, January 26, 2010 (Doc. Id. 20101-46433-02); Townsend Comment, January 26, 2010 (Doc. Id. 20101-46433-02).

[807] Ruhland Comment, February 11, 2010 (Doc. Id. 20102-47014-01).

[808] Reese Comment, February 8, 2010 (Doc. Id. 20102-46952-03).

[809] Skluzacek Comment, February 8, 2010 (Doc. Id. 20102-46952-03).

butter, and ice cream from their own creamery, would have its digital equipment affected by the power line.[810]

Steven Palmquist expressed his belief that, in the absence of a compelling need all public infrastructure should be routed along existing public infrastructure routes and easements. Any new routes and easements required should be placed where there is the minimum disruption to current populations. He recommended routing the proposed HVTL along federal or state highways and/or existing utility rights-of-way. He described this outcome as longer than the most direct route but the best compromise.[811]

Alice Nytes urged adoption of the Alternative 5P-02 route to take the HVTL away from the five homes, feedlot, 100-year old maple trees, apple trees and windbreak that would be affected by placing the HVTL on the Preferred Route. She noted that her property already has the MinnCan pipeline running through it.[812]

Kim Miller opposed adoption of the alternative route that would follow 180th Avenue to 350th Street in Grandview Township, Lyon County. The commentator indicated that this alternative would affect more residences and result in a longer power line.[813]

Cindy Helmberger objected to routing the HVTL through Scott County (rather than Rice County) based on the relative population affected and the potential for development of the land in Scott County. She also objected to some of the notice provisions and the increase in capacity of the Lake Marion Substation.[814]

Bob and Alice Nytes supported adoption of the P5-02 alternative to the Preferred Route as affecting five fewer homes. They noted that their property already has the MinnCan pipeline and a 345 kV HVTL running through it.[815]

Tracy Ferrell urged routing the transmission line within the right-of-way along CR 62 in Scott County, co-locating the HVTL with the already existing 69kV poles and lines rather than turning the proposed HVTL north into agricultural and residential property. She noted that this suggestion falls within the already identified CapX2020 preferred route. She proposed another alternative route, running in the right-of-way along

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[810] Lund Comment, February 8, 2010 (Doc. Id. 20102-46952-04).

[811] Palmquist Comment, February 8, 2010 (Doc. Id. 20102-46952-04).

[812] Nytes Comment, February 9, 2010 (Doc. Id. 20102-46952-02).

[813] Miller Comment, February 9, 2010 (Doc. Id. 20102-46952-02).

[814] Helmberger Comment, February 9, 2010 (Doc. Id. 20102-46952-02) and February 9, 2010 (Doc. Id. 20102-46900-01).

[815] Nytes Comment, February 10, 2010 (Doc. Id. 20102-46952-02). Nytes Comment, February 8, 2010 (Doc. Id. 20102-46900-06).

Highway 2, burying the line between Highways 27 & 91 to lessen its impact to residences.[816]

Mn/DOT made the following comment regarding this proceeding:

> DNR Mn/DOT has participated in this proceeding pursuant to Minn. Stat. §216E.10, Subd. 3, as a state agency authorized to issue permits required for construction of a high voltage transmission line. Both the preferred and alternate routes proposed by CapX2020 have a number of locations that either cross or run parallel to highways that are part of the state trunk highway system. In our participation in this proceeding, Mn/DOT has endeavored to articulate the potential impacts that the transmission line may have on the transportation system, and on trunk highways in particular. Mn/DOT will consider these impacts in deciding whether toissue a permit for each location where the HVTL would occupy a portion of a trunk highway right-of-way.
>
> As we have explained, Mn/DOT's Utility Accommodation Policy seeks to permit utilities to occupy portions of the highway rights-of-way where such occupation does not put the safety of the traveling public or highway workers at risk or unduly impair the public's investment in the transportation system. The exact location for the poles of a high voltage transmission line along a trunk highway cannot be determined until we can examine all the specifics of each proposed pole location, including but not limited to factors such as the width of the highway right-of-way at that location, the geometry of the highway, the topography of the drainage ditch, and the presence of other structures in the area. For this reason, Mn/DOT believes that for any location where the HVTL route that is ultimately selected either crosses or runs parallel to a highway right-of-way, the route should not be limited to specific alignments. Rather, Mn/DOT respectfully requests that the selected route at these locations be as wide as the full width of the routes proposed in the CapX2020 application. This would be sufficiently wide to enable Mn/DOT and CapX2020 to examine each pole location to determine where the HVTL can be placed to accommodate the needs of both parties.[817]

Mn/DNR submitted a review of the FEIS prepared for this proceeding which stated:

> Previous comments submitted by the DNR requested information on permanent and temporary impacts to resources such as Wildlife Management Areas (WMAs), Minnesota County Biological Survey (MCBS) sites of biodiversity, public water and river crossings, native

[816] Ferrell Comment, February 8, 2010 (Doc. Id. 20102-46952-02).

[817] Mn/DOT comment, February 8, 2010 (Doc. Id. 20102-46900-07).

prairies, wetlands, and trails. The responses provided in the FEIS included references to very general information in the DEIS such as descriptions of the value of resources and general expected impacts if an area were to be crossed. Mitigation methods are also generally listed. Distances to resources are given in a table and the number of watercourse and Public Waters Inventory watercourse crossings is given for each route. However, this does not describe expected impacts in enough detail to evaluate specific routes and segments. It is difficult for the DNR to provide constructive input during the environmental review process about which route or segments would best protect state resources if information such as estimated acreage of permanent and temporary impacts for each location, total impact acreage for each route, and specific plans for mitigation of impacts are not provided in the Draft or Final Environmental Impact Statements. This EIS also did not identify whether impacts would be expected on existing transmission line corridors or new corridors. The above information is necessary for evaluation of impacts to natural resources and evaluation of license to cross permits.

The project applicant is encouraged to coordinate directly with the DNR through a pre-application meeting(s) concerning impacts to DNR administered lands, public waters, public water wetlands, and state-listed species prior to application for waters permits and utility licenses to cross public lands and public waters. The applicant is encouraged to further develop mitigation plans for impacts related to these resources and review these with the DNR prior to applying for any DNR permits. Specific examples of crossings discussed in the attached November 30, 2009 letter from the DNR to the Minnesota Department of Commerce, Office of Energy Security (OES) that should be discussed in pre-application meetings include the Bucks Lake, Chub Lake, and Minnesota River crossings. As described in the referenced letter, the DNR does not support a crossing of Bucks Lake due to the high concentration of species using the area for resting, roosting, feeding and nesting, and associated recreational value for the community. The DNR also has concerns regarding the construction of a transmission line through Chub Lake due the adjacent boundary of Chub Lake WMA, the presence of a Central Region Regionally Significant Ecological Area, the Chub Creek Marsh wetland complex, high usage by waterfowl and migratory bird species, and categorization of the location as an area of High Biodiversity Significance.

Further coordination is also encouraged with environmental review staff regarding temporary or permanent impacts to native prairie, Species of Special Concern plants, rock outcrops, basswood forests, and MCBS sites of biodiversity.

The DNR recommends that an independent environmental monitor be employed to evaluate compliance with permit requirements during project construction. An environmental monitor employed by the DNR or an

> independent firm may also be required as part of license to cross permitting.
>
> The FEIS includes Comment Response Number 269w, which narrows the areas identified for new and existing substations. This additional information is appreciated. However, it was difficult to locate many of the areas identified with the directions provided in the FEIS response to comments. A map with substation locations would better inform the DNR review in preparation for permitting.[818]

The USFW provided supplemental comments relating specifically to the potential impact of the proposed HVTL on eagles, stating:

> In particular, we wish to address the Minnesota River crossing alternatives near Le Sueur and Belle Plaine, Minnesota, and how this activity could affect bald and golden eagles. During the last several months, the Fish and Wildlife Service has promulgated new regulations under the Bald and Golden Eagle Protection Act (BGEPA). These new regulations are designed to help landowners and developers comply with BGEPA while being compatible with the preservation of eagles. We have hired new staff, and have been working diligently with citizens and businesses to avoid and minimize impacts to bald and golden eagles. In that spirit, we would like to offer our additional input regarding potential impacts of your project on eagles. As discussed below, we strongly encourage you to consider a non-aerial river crossing regardless which crossing site is ultimately selected.
>
> For the reasons discussed in the attached analysis ("Disturbance of Bald Eagles at Winter Roosting/Foraging Areas and Effects of Transmission Line River Crossings on Bald Eagles"), the Fish and Wildlife Service concludes that both the proposed Le Sueur and Belle Plaine crossings will likely disturb nesting, foraging, and winter roosting eagles. Both Bald Eagles and Golden Eagles are present in the Minnesota River Valley. The placement of the power line crossing in an area of such high eagle concentration and in a major movement corridor (the Minnesota River) can reasonably be expected to cause eagle mortality through both line collisions and electrocution. Additionally, erecting structures in this high eagle concentration area will encourage eagles to nest on poles and transmission lines, causing electrocution of eagles and damage to the power lines (electrical shorts, fires, power outages). These disturbances (including harassment and mortality) of bald and golden eagles are a violation of the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c).

[818] MnDNR comment, February 8, 2010 (Doc. Id. 20102-46952-01).

> Permits are available (and required) for all activities that kill or disturb eagles. (See Eagle Permit Regulations at 50 C.F.R. Part 22). However, no permit would be available unless an applicant has first taken all practicable steps to avoid take of eagles. (See 50 C.F.R. 22.3, defining "practicable.") In this context, we urge you to further analyze both the economic and technological feasibility of a non-aerial line at any Minnesota River crossing, and to follow the other recommendations in the attached document.[819]

Scott County conducted its own evaluation of Sections 1-7 of the Draft EIS document. Scott County expressed concerns with segments of the Preferred and Alternate Route options that cross Scott County as follows:

> 1. Impact on Highway Corridor & Interchange Plans: Scott County remains concerned that the Preferred Helena to Lake Marion Substation route segment is proposed along 12 miles of County Road 2. Locating the proposed transmission line along this corridor will negatively impact the County's long-term plans to widen and expand County Road 2. This roadway is classified as an A-minor arterial and the corridor right-of-way is planned to widen to 150 to 200 feet under the County's adopted 2030 Transportation Plan (attached is a map of the adopted Future Functional Classification Map for Scott County). The placement of the transmission lines within this county highway corridor should consider this future ROW need, and could result in placing transmission line poles deeper into adjacent farmland which might cause considerable agricultural impacts. The County is not in a position to pay for the relocation of any transmission line poles as part of any future corridor improvement project.
>
> Section 6.9.1 of the Draft EIS acknowledges this issue and indicates that the applicants plan to install poles just outside the existing public ROW — about five feet into fields or other private property when possible. It further states that the applicant's reason for this placement is to "avoid potential liability for the cost of moving the poles if the roadway is expanded in the future." Again, to avoid potential liability for the costs of moving poles by either the private utility or the local government, the County recommends that the routes do not follow roadways planned for future expansion — such as County Road 2.
>
> Scott County and the Minnesota Department of Transportation have entered into a Joint Powers Agreement to jointly prepare a CSAH 2 and I35 Interchange Footprint Study. The footprint will be used as a tool to preserve the necessary right-of-way for planned interchange improvements (which falls within the proposed Alternate route corridor). This potential routing issue needs to be addressed in the Final EIS.

[819] USFW comment, February 8, 2010 (Doc. Id. 20102-46903-01).

2. Impact on Existing Homes/Human Settlements: Scott County remains concerned that the Preferred Helena to Lake Marion Substation route segment impacts more existing homes than the Alternate Helena to Lake Marion Substation route segment. The Draft EIS in Section 7.5.4.1 confirms Staff's previous analysis that the Preferred route segment crosses more existing homes - within 500 feet of the proposed route centerline than the Alternate route segment. Using the criteria discussed throughout the public involvement process of "keeping the line as far away from homes as possible," it appears to staff that the Alternate route segment continues to better meet this set of criteria.

County staff shares concerns and opposition raised by the City of Elko-New Market regarding the alternative route 5P-03 through the city's downtown. This route will have a significant impact on the community. This route option should be dropped from further consideration.

3. Impact on Planned Future Development Areas and Parcels: Scott County remains concerned that the Preferred Helena to Lake Marion Substation route impacts planned future development areas and individual parcels more than the Alternate Helena to Lake Marion Substation route segment. Staff is pleased to see the County's adopted 2030 Land Use Plan analyzed during the Draft EIS process. As noted in the Draft EIS, the Preferred Helena to Lake Marion Substation route segment crosses Urban Expansion Areas slated for long-term urban service areas (with end land use densities guided at 3 units per acre) and Rural Residential Reserve Areas (with end land use densities guided at 2.5 to 10 acre lots). The Draft EIS accurately notes that the Alternate Helena to Lake Marion Substation route segment crosses areas in Rice and Le Sueur Counties that are not planned for this much residential development.

Staff is concerned that Section 7.5.4.7 does not acknowledge the potential impact the transmission line corridor will have on those properties along County Highway 2 that are already impacted by the MinnCan pipeline corridor. These two utility corridors in close proximity create undue hardship on the future development options for these landowners and impede local government's ability to provide logical extension or roads and other infrastructure in this area.[820]

Scott County also submitted a map prepared by the Scott County Planning Department identifying the parcels along the Preferred Helena to Lake Marion Substation route segment that would be dually impacted by the transmission line and the existing MinnCan pipeline.[821]

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[820] Scott County comment, January 8, 2010.

[821] Scott County January 8, 2010.

Dan Prchal expressed concern that the HVTL route would run through prime agricultural farmland just south of New Prague in Lanesburgh township, affecting Century Farms that have been operated by multiple generations. He noted that these farms are smaller, increasing the impact of the HVTL's 8 foot diameter poles. He expressed concern that the poles running through the middle of fields can break drainage tiles. He noted that there is a natural gas pipeline already running through his farm field. While the Applicants indicated that there will be compensation for broken tile and compaction, Mr. Prchal was concerned that the process of obtaining compensation would be unduly burdensome.[822]

Steve Ruhland objected to the HVTL running on the south side of 280th street as it would put the line diagonally through his fields, which he contended would ruin them and put the aminals in his livestock facilities in jeopardy. He maintained that the soil structure cannot hold up a 150 foot tall tower with the weight of the cables attached. He related his experience with HVTL running across a farm field:

> [While the actual "pole impact area" may be 1000 square feet as stated in the final EIS response 82b, the amount of agricultural land impacted is much larger. In a modern farming operation equipment is very wide, some planters and sprayers may be up to 120 feet wide, if a post happens to be in the middle of your path with this equipment that would mean you would have to move more than 60 feet to get around the pole. In this process you would be running over crop to get around this post, wasting land and expensive inputs.
>
> On the aforementioned rented farm I have to go around three sets of posts in the middle of fields so I know first hand of the impacts they cause, with areas at least ten times the "pole impact" area unusable. Running lines through the middle of fields also makes it impossible for aerial application of crop protection chemicals to be carried out. This practice of using planes or helicopters is common because it is economical and limits crop damage but can't be done with a power line running diagonally through a field. If the poles were placed at the edges of farms, such as on property lines or along roads, the impact is greatly reduced because all that is necessary to avoid the posts is to swerve around the post as they would always be on one end of the machine. It also allows aerial applications to proceed with limited impacts. For these reason running through the middle of fields should not be allowed for this line, and the preferred and alternate line in this area should not be used.

He urged that, if the Le Sueur river crossing is chosen, that the HVTL should continue east staying to the southern route in Le Sueur County. For a Belle Plaine crossing, he suggested that the line continue eastward using the northern route through Scott County. In the alternative he suggested that the existing 345kv line from 296th

[822] Prchal comment, February 8, 2010 (Doc. Id. 20102-46900-04).

street in Le Sueur County to 270th street in Scott County be used, updating it to a triple circuit HVTL. Mr. Ruhland noted that this approach would minimize the impact of poles in productive fields, reduce the number of homes within 500 feet of the HVTL, and reduce the impact on livestock from the power line.[823]

Clarence L. & Delores M. Salaba objected to the Alternate Route & the alternative to the Alternate running along 60th St. to Leaf Trail in Wheatland Township, Rice County. The commentators noted that the Alternate route, running along Le Sueur Cty. #28 & Rice County #2, then north along Hwy. #19, would put the lines in close proximity to several homes, and Century Farms. The Salabas' land along Hwy. #19 would have approximately six poles. The commentators noted that these would impede the farmer who rents that land from farming, using huge equipment directed by GPS systems. The renter also checks his crops by using his plane to do some low flying over those fields. The 60th Street to Leaf Trail alternative would place the HVTL in very close proximity to several homeowners with businesses at their residences, including a beekeeper, a greenhouse, a dairy herd, and a woodworker.[824]

Steve and Stacy Schmitz and Gordie and Ann Schmitz objected to 260th Street/County Road 2 portion of the preferred route as inconsistent with the Scott County 2030 Comprehensive Land Use Plan, designating the area for future residential development. The commentators noted that this area was already used for the installation of the MinnCan Pipeline, and maintained that routing the HVTL along a similar route would be unjust and unreasonable. They contended that moving the line to the south side of 260th Street, as proposed by the Department of Commerce in the DEIS Section 7.5.1.1 Alignment Alternatives - Inset #1 would not address anyone's concerns.[825]

Lance Wagner objected to Alternate Route 5A-02 as likely to impair the small runway on his property for an ultralight aircraft, take more land, increase the cost of the HVTL by millions of dollars and destroy a wetland.[826]

Daniel and Arlene Markell objected to the Preferred Route along 340th Street between 190th Avenue and 260th Avenue in Section 1 of Grandview Township, Lyon County. The Markells noted that the Preferred Route would likely destroy their windbreak, which includes many older trees and provides habitat for wildlife. They noted the significant number of homes that would be in close proximity to the HVTL. As an alternative, they suggested that the HVTL be run on 190th Avenue north from 340th Street for one mile to 350th Street. From that point, the HVTL would run east on the south side of 350th Street for five miles, resuming the Preferred Route at 280th Avenue.

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[823] Ruhland comment, February 8, 2010 (Doc. Id. 20102-46900-04).

[824] Salaba comment, February 8, 2010 (Doc. Id. 20102-46900-04).

[825] Schmitz comment, February 8, 2010 (Doc. Id. 20102-46900-04) and Schmitz comment, February 4, 2010 (20102-46839-01).

[826] Wagner comment, February 8, 2010 (Doc. Id. 20102-46900-02).

They noted that far fewer residences are located on 350th Street and it is a minimum maintenance street. Failing that adjustment of the route, they requested that the HVTL be run on the north side of 340th Street, to preserve their windbreak.[827]

Donald and Suzanne Decrock, Betty and Don Verkinderen, Nathan and Tresa Rigge, Gary and Sharon Kesteloot, Gordon Timmerman, Madeline Timmerman, and Bruce Timmerman objected to the proposal to run the HVTL on 190th Avenue north from 340th Street for one mile to 350th Street, thence east along 350th Street, resuming the Preferred Route at 280th Avenue. They expressed their belief that such a route would affect more residences than the 340th Street segment as well as crossing a wildlife management area.[828]

Michelle Johnson maintained that the HVTL would result in "Irrevocable negative effects on sensitive natural resources, including rare and threatened plant species, disruptions in migratory paths for both birds and land animals, and destruction of an already low number of wetlands, woodlots, and other natural corridors. She contended that her property, along with three adjacent parcels located southeast of Dennison, constituted an active and critical environment with rare sedge grass, compass plant, and other native prairie grasses being returned through restoration efforts. She maintained that this area is a critical wildlife habitat for dozens of bird species (including wild turkey and pheasant), deer, and many animals. She also described the property as "a very large and important wetland complex, providing habitat and migratory corridors." She proposed that the HVTL follow the existing route along along the Highway 52 industrial corridor.[829]

Deb McKay noted that, while the Minnesota River is considered one of the more polluted waterways in the country, the MPCA has been working hard to clean up the river and the proposed HVTL would affect the natural beauty and wildlife in and around the cities of Le Sueur and Henderson in the Minnesota River Valley. She described this as vital for drawing tourists and visitors. She contended that bed and breakfasts, nature organizations like Henderson Feathers, Inc, Henderson Hummingbird Hurrah, Inc, and public parks and nature educational centers like Rush River State Park & the Ney Nature Center are vital to the Le Sueur/Henderson area. As an alternative, she proposed that the HVTL cross the Minnesota River at Belle Plaine where there is more business and industry and less effort at becoming a tourist destination.[830]

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[827] Markell comment, February 2, 2010 (Doc. Id. 20102-46900-02).

[828] Timmerman Comments, February 5, 2010 (Doc. Id. 20102-46839-01); Decrock Comment, February 3, 2010 (Doc. Id. 20102-46790-01); Verkinderen Comments, February 3, 2010 (Doc. Id. 20102-46790-01); Rigge Comments, February 3, 2010 (Doc. Id. 20102-46790-01); Kesteloot Comments, February 4, 2010 (Doc. Id. 20102-46790-01).

[829] Johnson Comment, February 8, 2010 (Doc. Id. 20102-46900-07).

[830] McKay Comment, February 7, 2010 (Doc. Id. 20102-46900-07).

The Derrynane Township Board in Le Sueur County urged that the HVTL stay in the general area of the Minnesota River crossing (if at Belle Plaine, staying north in Scott County near County Road 2, if at Le Sueur, then staying south in Le Sueur County). The Board objected to routing the HVTL in a zig-zag fashion and urged the Commission to consider other alternatives that avoid Derrynane Township.[831]

Ron Ovans maintained that the HVTL would create a link in the accident chain if placed too close to the flight paths utilized by aircraft taking off and landing at the Sky Harbor Airpark, near Webster, Minnesota. He urged that the HVTL be located as far away from the airfield as possible.[832]

Lori Endres objected to the alternate to the alternate route (identified as 6A-01 and 6A-02 on Exhibit 202) as dividing two quarter sections of prime agricultural land (NE ¼ of section 4 and NW ¼ of section 3 in Hampton Township, Dakota County) that have overlapping pivot style irrigation systems that would be rendered useless. She objected to the alternate to the alternate route identified as 6A-03 running north and south near County Road 47 as harming one of the few untouched and undeveloped wooded wetlands and karst features remaining in southern Minnesota. She noted that the karst feature was not identified on Exhibit 202 and she provided maps to indicate its location.[833]

Lynn Albrecht urged that the USFW and Mn/DOT suggestions be followed by making any crossing of the Minnesota River a non-aerial crossing.[834]

Allan Mueller provided additional comments regarding mitigation, particularly regarding wildlife around High Island Creek in Sibley County. He objected to the labeling of the Preferred Route and the various alternatives as indicating some form of preferential treatment.[835]

Al and Laurie Dietz objected to the Alternate Route proposed to run south of New Prague where the route diverts off of Highway 28, creating 90 degree turns and infringing on the buffer zone of New Prague. They contended that this route would destroy prime properties and dissect farms senselessly. They urged that the line be routed along existing roadways where there are already utility lines and legal setbacks in place.[836]

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[831] Derrynane Township Board Comment, February 8, 2010 (Doc. Id. 20102-46900-03).

[832] Ovans Comment, February 8, 2010 (Doc. Id. 20102-46900-03) and (Doc. Id. 20102-46839-01).

[833] Endres Comment, February 7, 2010 (Doc. Id. 20102-46900-03).

[834] Albrecht Comment, February 8, 2010 (Doc. Id. 20102-46900-03).

[835] Mueller Comment, February 5, 2010 (Doc. Id. 20102-46839-01).

[836] Dietz Comment, February 4, 2010 (Doc. Id. 20102-46790-01).

RES Specialty Pyrotechnic, Inc. expessed its support for the Applicants' proposed adjustment of the route around the RES facility (RES 1000). RES Comments, February 3, 2010 (Doc. Id. 20102-46790-01).

Ralph Sullivan objected to the HVTL being sited in either Rice or Le Sueur Counties as being unfair to the land owners in these locations. He contended that the compensation offered to land owners by the Applicants was insufficient for the harm done.[837]

Ray and Donia Kaufenberg urged the adoption of Alternative Segment 6P-07 between Pillsbury Avenue and Dodd Road along 245th Street East. They identified the impacts to a number of farms, other properties, wildlife areas, and cultural resources that would be affected by the Preferred Route in this area.[838]

Todd Trabant, Merrily Trabant, and Caitlin Trabant urged that any HVTL be placed within the right-of-way along CR 62 in Scott County, replacing or adding to the already existing 69kV poles and lines rather than sending the line north into agricultural and residential property. As an alternative, they suggested that the route follow County Highway 2, mitigating the impact to residences there by burying the line between Highways 27 and 91.[839]

Brandt and Rachelle Volk indicated that Appendix C, page 8, section 17 of the FEIS showed a neighbor's building located within 75' of the proposed HVTL, but their home, (located 62' from the line) and their large pole building (35' from the line) were not marked on the map. They urged that the line be located elsewhere due to the extremely close proximity of the HVTL to their buildings.[840]

Bimeda, Inc. objected to the Myrick Street Alignment Alternative and requested that a route be chosen for the HVTL that does not affect Bimeda's property. Bimeda maintained that the presence of stored isopropyl alcohol, a highly flammable liquid and vapor used in Bimeda's operations, creates an extremely hazardous situation that can only be remedied by relocating the HVTL. The alcohol will be stored in one 10,000 gallon and two 5,000 gallon vented tanks, which are currently being installed. Bimeda has obtained the necessary permits for its tank farm, adjacent to its manufacturing plant, and the only work remaining is installation of the tanks themselves. Within Bimeda's Le Sueur facility, Bimeda noted that it operates a full service FDA-approved laboratory, which is the only laboratory Bimeda uses for testing in the United States. This laboratory utilizes high precision instruments to conduct the tests, such as High

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[837] Sullivan Comment, February 4, 2010 (Doc. Id. 20102-46790-01).

[838] Kaufenberger Comment, February 4, 2010 (Doc. Id. 20102-46790-01).

[839] Trabant Comments, February 2, 2010 (Doc. Id. 20102-46790-01) and January 27, 2010 (Doc. Id. 20101-46485-01).

[840] Volk Comment, February 2, 2010 (Doc. Id. 20102-46790-01).

Performance Liquid Chromatography and Gas Chromatography, which Bimeda contends could be affected by the EMF/ELF emitted by the HVTL.[841]

Roger Schneider, Ph.D., noted that Bimeda's bulk storage of a flammable liquid within 100 feet of the HV transmission line could create a hazard to both the stored liquid and the HVTL itself. Dr. Schneider performed a risk assessment using combustion science and fire dynamics data and concepts. He concluded, to a reasonable degree of scientific and engineering certainty, that the closest point of approach between the proposed HVTL and Bimeda's flammable liquid storage tank farm should be no less than 750 feet. Since the proposed Myrick Street Alignment would come closer to Bimeda's tank farm, Dr. Schneider recommend that the Applicant's Belle Plaine Alternate Route be selected for the Minnesota River crossing.[842]

Richard and Jennifer Gerster noted that both the Preferred Route and Alternate Route segments 6P-06 and 6P-03 would affect land that they own and fields that they rent. On the Preferred Route, there currently are two irrigators in their field of 105 acres along the east end of 220th Street and the route would prevent at least one of these two irrigators from being fully utilized. In the fields that they rent, east of 220th Street, pivot irrigation systems are in the planning stages. They contend that the Preferred line would also negatively impact their ability to sell subdivided lots in the future. They maintained that alternative segments 6P-06 and 6P-03 are likely to impact one irrigator on 100 acres of land.[843]

Jon Hendricks supported adoption of the Alternative Route between the Helena and Lake Marion substations because of the impacts of the Preferred Route on the properties along Scott County Road 2, future transportation plans, the visual impact to Cedar Lake Farm Regional Park, and the potential to reduce property values, resulting in lower property tax revenues.[844]

Ardis Bengtson, Mona Bengtson, and Vida Kollath supported adoption of the P6-06 route to avoid impacts to the properties along 220th Street, near Hampton.[845]

Milo Christensen, Jr. and Barbara Christensen objected to the manner in which farm impairments are compensated through a one time easement payment along with compensation for crop damage, compaction, etc. They proposed a continuous payment

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[841] Bimeda Comment, January 28, 2010 (Doc. Ids. 20101-46568-01, 02 and 03).

[842] Dr. Schneider Comment, January 27, 2010 (Doc. Id. 20101-46568-02).

[843] Gerster Comments , January 29, 2010 (Doc. Id. 20101-46593-01) and January 27, 2010 (Doc. Id. 20101-46485-01).

[844] Hendricks Comments, January 29, 2010 (Doc. Id. 20101-46593-01) and January 19, 2010 (Doc. Id. 20101-46485-01).

[845] Bengtson Comment, January 29, 2010 (Doc. Id. 20101-46593-01).

be established for as long as the line exists so that the owners in future decades could also receive some compensation.[846]

Dick Ozment and Marilyn Seehausen supported following the southern Alternate Route through Dakota County or, if that is not chosen, Alternative Segment 6P-06. Those alternatives would limit the impact of the line on the residents of 220th Street. The 6P-06 segment would put the line along only one side of the their property and avoid having the line over all-terrain vehicle trails that they have created on their property.[847]

Joyce Osborn and Judy Martin of the United Citizens Action Network (UCAN) objected to perceived inequities in the eminent domain statutes and urged that changes be adopted.[848]

Douglas and Marcene Kruger urged that the P6-06 Alternative Segment be adopted to move the HVTL away from 220th Street, where Mr. Kruger plans to use his land for flying ultralight aircraft. They also expressed concern over the possible impact of the line on nearby wetlands.[849]

Karen (Kim) Howard, Owner of the Majestic Hills Ranch for Children (Majestic Hills) in Scott County submitted comments, a petition signed by 167 persons and letters from parents, board members and an educational psychologist. Majestic Hills provides therapy to children with disabilities through horseback riding. Typically over 100 children are served each week. Ms. Howard expressed concern that the noise emitted by HVTLs could have a disproportionate impact on some of the children served at Majestic Hills, because their disabling conditions make them particularly sensitive to such stimuli. Ms. Howard noted that the HVTL was proposed to run through the hay field of Majestic Hills and interrupt the existing riding trail. Ms. Howard and the numerous persons writing on behalf of Majestic Hills urged that the HVTL be sited away from the ranch.[850]

Eric Johnson noted that, when measured on the ground, the proposed HVTL appears to be located only 50 feet from his home.[851]

Mary Ann Enggren noted that a large variety of birds used the wetlands in the vicinity of her property as habitat and the HVTL was likely to increase avian mortality. She noted that the noise of the line and the visibility of the poles would have a significant negative impact due to the close proximity of the line. She expressed

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[846] Christensen Comment, January 27, 2010 (Doc. Id. 20101-46485-01).

[847] Ozment Comment, January 22, 2010 (Doc. Id. 20101-46485-01).

[848] Osborn Comment, January 16, 2010 (Doc. Id. 20101-46485-01).

[849] Kruger Comments, January 23, 2010 (Doc. Id. 20101-46433-03).

[850] Howard Comment, January 26, 2010 (Doc. Id. 20101-46433-01).

[851] Johnson Comment, January 23, 2010 (Doc. Id. 20101-46433-02).

concern that automobile collisions could occur with the power poles. She noted that the Preferred Route, even with Alternative 6P-06 would put the line uncomfortably close to her home.[852]

Connie Townsend, Ruth Beadle, and Lynn Brady noted that the Preferred Route would require that many trees on their property be removed. They expressed concern over the potential impact on their Kuvasz Kennel. They supported Alternative Segment 6P-06 as affecting fewer homes than the Preferred Route.[853]

[852] Enggren Comment, January 26, 2010 (Doc. Id. 20101-46433-02).

[853] Townsend Comment, January 26, 2010 (Doc. Id. 20101-46433-02).

Attachment 2 – Attendance at Public Hearings for the Brookings County to Hampton 345 kV Transmission Line Project

Date / Location	Time	Estimated Public Attendance
November 30, 2009 Prairie's Edge Casino & Resort 5616 Prairie's Edge Lane Granite Falls, MN	2:30 P.M. – 5:00 P.M.	50
	7:00 P.M. – 10:00 P.M.	50
December 1, 2009 Best Western 1500 East College Drive Marshall, MN	1:00 P.M. – 5:00 P.M.	100
	7:00 P.M. – 10:00 P.M.	100
December 2, 2009 Redwood Area Community Center 901 Cook Street Redwood Falls, MN	1:00 P.M. – 5:00 P.M.	75
	7:00 P.M. – 10:00 P.M.	75
December 3, 2009 Winthrop Veterans Club 206 North Main Street Winthrop, MN	1:00 P.M. – 5:00 P.M.	75
	7:00 P.M. – 10:00 P.M.	75
December 7, 2009 Brass Top Hall/Hog Wild Saloon 514 Main Street Henderson, MN	1:00 P.M. – 5:00 P.M.	150
	7:00 P.M. – 10:00 P.M.	150
December 8, 2009 Lonsdale American Legion 115 2nd Avenue Northwest Lonsdale, MN	1:00 P.M. – 5:00 P.M.	100
	7:00 P.M. – 10:00 P.M.	100
December 9, 2009 New Prague, MN	Canceled / Rescheduled	
December 10, 2009 Holiday Inn Hotel & Suites 20800 Kenrick Avenue Lakeville, MN	1:00 P.M. – 5:00 P.M.	100
	7:00 P.M. – 10:00 P.M.	150
December 11, 2009 Holiday Inn Hotel & Suites 20800 Kenrick Avenue Lakeville, MN	9:30 A.M. – 12:30 P.M.	75
December 28, 2009 Knights of Columbus Hall 411 4th Ave. New Prague, MN	1:00 P.M. – 5:00 P.M.	200
	7:00 P.M. – 10:00 P.M.	200
TOTAL		**~1825**