

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

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

Vice-Chair
Commissioner
Commissioner
Commissioner

<p>In the Matter of the Application for a HVTL Route Permit for the Little Falls 115 kV Transmission project.</p>	<p>ISSUE DATE: DOCKET NO. ET-2, E015/TL-11-318 FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDER ISSUING A ROUTE PERMIT TO GREAT RIVER ENERGY AND MINNESOTA POWER FOR A 115 KILOVOLT TRANSMISSION LINE AND ASSOCIATED FACILITIES</p>
---	--

The above matter came before the Minnesota Public Utilities Commission on March 22, 2012, acting on an application by Great River Energy (GRE) and Minnesota Power for a route permit to construct a new 3.8-mile long 115 kV overhead transmission line in Morrison County, Minnesota.

A public hearing was held on January 12, 2012, at the Little Falls Township Hall near the city of Little Falls, Minnesota. The hearing was presided over by Judge Bruce Johnson, Administrative Law Judge (ALJ) for the Minnesota Office of Administrative Hearings (OAH). The hearing continued until all persons who desired to speak had done so. The comment period closed on January 27, 2012, at 4:30 p.m.

STATEMENT OF ISSUE

Should the Commission find that the environmental assessment and the record adequately address the issues identified in the scoping decision? Should the Commission issue a route permit identifying a specific route and permit conditions for the Little Falls 115 kV Transmission Line project?

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

FINDINGS OF FACT

Applicants

1. Great River Energy (GRE) is a not-for-profit generation and transmission cooperative based in Maple Grove, Minnesota. GRE provides wholesale electrical energy and related services to 28 member cooperatives, including Crow Wing Power (CWP). Minnesota Power an investor-owned public utility with its headquarters in Duluth, Minnesota.¹
2. On June 16, 2011, GRE and Minnesota Power (collectively, the Applicants) applied for a high-voltage transmission line route permit to construct a new 115 kV transmission line and modifications to existing substations in Little Falls Township in Morrison County, Minnesota.²
3. CWP distributes electricity and related services to customers in the Little Falls area.³

Project Description

4. The project is located in Little Falls Township, Section 18, T40N, R30W and Section 13 and 14, T40N, R31W, in Morrison County, Minnesota.⁴
5. The Proposed Route is 3.8 miles of new overhead 115 kV transmission line that would exit the east side of the existing Minnesota Power Little Falls Substation and continue east approximately 0.8 miles cross-country, turn south along 180th Avenue for approximately 0.5 miles, east approximately 1.5 miles along County Road 256/133rd Street, and north approximately 1.0 mile along 195th Avenue to the CWP Little Falls Substation.⁵
6. The project would consist of the following:
 - Construction of approximately 3.8 miles of new 115 kV transmission between the Minnesota Power Little Falls Substation and the CWP Little Falls Substation;
 - Relocation of existing overhead and underground distribution lines along County Road 256/133rd Street and along 195th Avenue to the new 115 kV transmission structures;⁶

¹ Exhibit (Ex.), 2, Route Permit Application (Application) at p. 1-1

² Ex. 2 at p. 1-4 (Application).

³ Ex. 2 (Application)

⁴ Ibid. at p. 3-1 and Appendix B, Figure B-5

⁵ Ex. 16 Environmental Assessment (EA), at p. 6 and Figures B1 to B-8.

⁶ Ex. 23 at pp. 15, 22-23 (Hearing Transcript)

- Modifications to the Minnesota Power Substation to accommodate the new 115 kV transmission line. New transmission facilities at this substation will consist of a new 115 kV breaker, disconnect switches, and station class surge arresters. All modifications to this substation will be performed within the existing fenced area;⁷ and
 - Modifications to and expansion of the CWP Little Falls Substation to accommodate the new 115 kV transmission line. New transmission facilities at this substation will consist of one 115 to 12.5 kV transformer, a two-way 115 kV transmission line switch with an interrupting device, a 115 kV high side terminal structure, and a circuit switch protective device to accommodate the new 115 kV transmission line termination. The substation would be expanded by approximately 0.1 acres to accommodate the modifications.⁸
7. As presented in the route permit application, GRE and Minnesota Power also identified and analyzed two alternative routes (Northern Alternative Route and Cross Country Alternative Route).⁹ The alternatives were rejected by the Applicants as they did not fulfill its objectives or provide any greater advantage with respect to the Proposed Route, pursuant to Minnesota Rule 7850.3100.
 8. In the Route Permit Application, the Applicants proposed to rebuild approximately 0.5 miles of Minnesota Line 46 east of the Minnesota Power Little Falls Substation and transfer ownership of that portion of line 46 to GRE, while Minnesota Power would construct a 0.5 mile segment of new 115 kV transmission line approximately 62 to 66 feet north of the existing Minnesota Power 46 transmission line.¹⁰ In their letter of December 15, 2011, the Applicants clarified that they would no longer seek permitting for the 0.5 mile rebuild of the Minnesota Power 46 line. The existing Minnesota Power 46 line will remain in place and GRE will construct and own the entire 3.8-mile project.¹¹

Route Width

9. GRE and Minnesota Power request a 300 foot route width for the entire length of the Proposed Route, as follows: 150 feet on each side of the alignment between the Minnesota Power Little Falls Substation and 180th Avenue; 150 feet on either side of 180th Avenue, 133rd Street/County Road 256, and 195th Avenue.¹²

Right-of-Way

⁷ Ex. 16 at p. 15 (EA)

⁸ Ibid. at pp. 15-16

⁹ Ex. 2 at pp. 4-4 and 4-5, and Figure B-13 (Application)

¹⁰ Ibid. at p. 1-5

¹¹ Ex. 12 (GRE Letter, December 15, 2011)

¹² Ex 23 at pp. 17-19 (Hearing Transcript)

10. Applicants will require a right-of-way of 100 to 120 feet for the new 115 kV transmission line. Applicants request a right-of-way of 120 feet (60 feet on either side of the centerline) for the first 0.8 miles of the new 115 kV transmission line between the Minnesota Power Little Falls Substation and 180th Avenue. Applicants request a right-of-way of 100 feet (50 feet on either side of the centerline) for the final 3.0 miles of the route from 180th Avenue to the CWP Little Falls Substation.¹³
11. Applicants propose to construct the transmission centerline approximately two to five feet outside road right-of-way where the transmission line would parallel a road. This would allow the transmission line to share a portion of the road right-of-way, resulting in an easement of lesser width to be required from the landowner.¹⁴ Approximately 3.0 miles, or 79 percent of the Route would follow county road right-of-way.¹⁵

Structure Types

12. The primary (tangent) structures GRE proposes to use for the project are single-circuit wood post structures with horizontal posts. The structures would be approximately 60 feet to 85 feet in height with an average span of 300 feet to 400 feet between structures.¹⁶
13. Structures along 133rd Street/County Road 256 and 195th Avenue would be designed to carry distribution lines under the transmission lines using structures identified in Finding 13 and underbuilt with the existing distribution lines using distribution crossarms. The structures would be approximately 70 feet to 85 feet in height with an average span of 250 feet to 300 feet between structures.¹⁷
14. Where angles in the new line are required, GRE anticipates that guyed angle structures using anchors and support cables will be the primary type of structure used. Where guying is not practicable, direct embedded laminated wood poles or steel poles on drilled pier concrete foundations will be utilized.¹⁸
15. For the cross-country portion of the project between the Minnesota Power Little Falls Substation and 180th Avenue, GRE anticipates using either H-frame structures, with heights of approximately 60 to 80 feet and spans of approximately 300 to 400 feet, or Single Pole Braced Post Delta Configuration structures with heights of approximately 60 to 85 feet and spans of 400 to 600 feet.¹⁹

¹³ Ex. 16 at p. 8 (EA)

¹⁴ Ibid., Ex. 23, at p. 15 (Hearing Transcript)

¹⁵ Ex. 16 at pp. 8-9 (EA)

¹⁶ Ibid. at pp. 8-9

¹⁷ Ibid. at p. 9

¹⁸ Ibid. at p. 8

¹⁹ Ibid. at p. 9

Conductors

16. The project would consist of three phases, each at the end of a separate insulator, and physically supported by structures or poles. The phases for this project would be constructed with three single aluminum conductor steel reinforced (ACSR) which each consist of a single conductor comprised of seven steel core strands surrounded by 26 outer aluminum strands. GRE would use 795,000 circular mil conductor with a diameter of approximately 1.1 inches.²⁰
17. To protect from lightning strikes one shield wire would be used on single pole structures and two wires would be used on H-frame structures.²¹

Substations

18. Minnesota Power would install one bay, a new 115 kV breaker, disconnect switches, and station class surge arrestors to accommodate connection of the new 115 kV transmission line. All modifications to the Minnesota Power Little Falls Substation would occur within the existing fenced area.²²
19. CWP would install one 115 to 12.5 kV transformer, a two-way 115 kV transmission line switch with an interrupting device, a 115 kV high side terminal structure, and a circuit switch protective device to accommodate the new 115 kV transmission line termination. CWP would expand the CWP Little Falls Substation by approximately 0.1 acres, moving the fenceline approximately 50 feet to the south.²³

Project Schedule

20. Based on information known at the time of the application filing, Applicants anticipate construction of the project to begin in mid-2012, with an in-service date of November, 2012.²⁴

Project Cost

21. Applicants estimate the total cost of the project, which includes permitting costs, natural resource and cultural resource surveys, easement and land acquisition, right-of-way clearing, construction costs, cost of structures, insulators, conductors, modifications to existing

²⁰ Ex. 16 at p. 8 (EA)

²¹ Ibid.

²² Ibid. at p. 15

²³ Ibid. at p. 16

²⁴ Ibid. at p. 1

substations, labor, and cost of equipment used to construct the new line to be approximately \$2.6 million.²⁵

22. GRE indicates its typical annual operating and maintenance cost for 115 kV transmission lines is approximately \$600 per mile of transmission line right-of-way. Costs include inspections typically performed by airplane or helicopter on a monthly basis. Inspections of substations and other equipment are generally performed on a monthly basis depending on the type of equipment. Maintenance and repairs to substations are performed on an as-needed basis with costs varying from substation to substation. Applicants anticipate that operating and maintenance costs associated with the substations would be minimal and consist mainly of weed control.²⁶

Procedural Summary

23. On April 11, 2011, in accordance with Minnesota Rule 7850.2800, subpart 2, Applicants filed a letter with the Commission noticing their intent to submit a route permit application under the alternative permitting process set forth in Minnesota Statutes 216E.04 and Minnesota Rules 7850.2800 to 7850.3900.²⁷
24. On June 16, 2011, Applicants filed a route permit application with the Commission for a new 3.8-mile 115 kV overhead transmission line in Little Falls Township in Morrison County, Minnesota.²⁸
25. Applicants transmitted a Notice of a Submittal of an Application for a Route Permit via e-mail on June 29, 2011, to those persons whose names are on the general list maintained by the Commission for this purpose, local and regional officials, and property owners in compliance with Minnesota Rule 7850.3300. Undeliverable e-mails were sent by US mail on June 29, 2011.²⁹
26. The Applicants published Notice of a Submittal of an Application for a Route Permit in the *Morrison County Record* on July 3, 2011 in compliance with Minnesota Rule 7850.3300.³⁰
27. In its July 27, 2011, comments and recommendations, EFP staff recommended that the Commission accept the Applicants' route permit application for the project as complete and authorize the EFP staff to process the application under the alternative permitting process pursuant to Minnesota Rules 7850.2800 to 7850.3900, authorize EFP staff to name a public

²⁵ Ex. 16 at p. 11 (EA)

²⁶ Ibid.

²⁷ Ex. 1 (Notification of Intent)

²⁸ Ex. 2 (Route Permit Application).

²⁹ Ex. 3 (Applicant Mailed Notice of Route Permit Application Filing)

³⁰ Ex. 4 (Applicant Published Notice of Route Permit Application Filing)

advisor, and determine that based on the available information an advisory task force is not necessary at this time.³¹

28. In its August 8, 2011, Order, the Commission accepted the application as complete and determined that the project is eligible for the alternative permitting process of the Power Plant Siting Act, Minnesota Statute 216E.04 and Minnesota Rules 7850.2800 to 7850.3900, authorized the EFP staff to name a public advisor, and determined that an advisory task force was not necessary at that time.³²
29. On August 18, 2011, EFP staff issued and mailed a Notice of Public Information and Scoping Meeting to those persons whose names are on the project list maintained by the Commission for this purpose in compliance with Minnesota Rule 7850.3500, subpart 1. EFP staff also sent the Notice to designated State and Federal Agency Representatives.³³
30. Minnesota Rule 7850, subpart 1, requires notice of the public information and scoping meeting to appear 10 days before the meeting is held. GRE, on behalf of EFP staff, published the Notice of Public Information and Scoping Meeting in the in the *Morrison County Record* on August 28, 2011³⁴

Public Meeting

31. In accordance with Minnesota Rule 7850.3500, subpart 1, EFP staff held a public information and scoping meeting on September 7, 2011, at Little Falls Township Hall near the city of Little Falls, Minnesota.
32. Approximately seven people attended the public information and scoping meeting. In total, two people provided oral comments and/or asked questions about the proposed project at the public scoping meeting. Topics and issues raised by the public at the meeting included: the selection of the proposed route, number of poles and spans between poles, and the start and duration of project construction.³⁵
33. The public comment period on the scope of EA closed on September 23, 2011. EFP received four comment letters during the scoping comment period.³⁶

³¹ Ex. 5 (Comments and Recommendations of EFP Staff on Application Acceptance)

³² Ex. 6 (Commission Order on Route Permit Application Acceptance).

³³ Ex. 7 (Mailed Notice of Public Information and Scoping Meeting).

³⁴ Ex. 8 (Published Notice of Public Information and Scoping Meeting).

³⁵ Ex. 9 (Oral Comments from Public Information and Scoping Meeting)

³⁶ Ex. 10 (Scoping Comment Letters)

34. The Minnesota Department of Natural Resources (DNR) submitted a comment letter identifying concerns with Blanding's Turtles, the location of bird flight diverters, and impacts and mitigation to wetlands.³⁷
35. The Minnesota Pollution Control Agency submitted comments concerning possible impacts from the project to water quality, specifically the Platte River.³⁸
36. The Minnesota Department of Transportation (MnDOT) submitted comments requesting that they be informed and consulted regarding potential impacts to MnDOT rights-of-way, particularly with the improvements to Crow Wing Power's Little Falls Substation.³⁹
37. GRE submitted a comment clarifying that the project includes improvements to Crow Wing Power's Little Falls Substation, as well as the Minnesota Power Little Falls Substation.⁴⁰
38. The scoping decision document for the EA was signed by the deputy commissioner of the Department of Commerce on October 5, 2011, filed with the Commission and made available to the public as provided in Minnesota Rule 7850.3700, subpart 3, on October 7 and 10, 2011.⁴¹

Environmental Assessment

39. The EA was filed with the Commission and made available on January 5, 2012.⁴² The EA was prepared in accordance with Minnesota Rule 7850.3700, and contained all the information required.
40. On January 5, 2012, EFP staff mailed a Notice of Availability of EA to those persons whose names are on the project contact list and to local and regional officials in compliance with Minnesota Rule 7850.3700, subpart 6.⁴³
41. Pursuant to Minnesota Rule 7850.3700, subpart 6, EFP staff published a Notice of Availability of EA in the January 9, 2012 edition of the *EQB Monitor*.⁴⁴

³⁷ Ex. 10 (Scoping Comment Letters)

³⁸ Ibid.

³⁹ Ibid.

⁴⁰ Ibid.

⁴¹ Ex. 11 (EA Scoping Decision).

⁴² Ex. 16 (EA)

⁴³ Ex. 17 (Mailed Notice of Availability of EA with Certificate of Service).

⁴⁴ Ex. 18 (*EQB Monitor* Notice of Availability of EA)

Public Hearing

42. On December 22, 2011, EFP staff mailed a Notice of Public Hearing to those persons whose names are on the project contact list and to local and regional officials in compliance with Minnesota Statute § 216E.03, subdivision 6.⁴⁵
43. Pursuant to Minnesota Statute § 216E.03, subdivision 6, GRE, on behalf of EFP staff, published a Notice of Public Hearing and Availability of EA in the *Morrison County Record* on December 25, 2011.⁴⁶
44. Minnesota Office of Administrative Hearings, Bruce Johnson, Administrative Law Judge (ALJ) presided over the public hearing conducted on January 12, 2012. The public hearing was held at the Little Falls Township Hall near the city of Little Falls, Minnesota. The ALJ provided an opportunity for members of the public to ask questions or comment on the proposed project verbally and/or to submit question/comments in writing.⁴⁷
45. According to the ALJ Summary of Public Testimony, approximately seven members of the public attended the public hearing. All persons who desired to speak were afforded a full opportunity to make a statement on the record.⁴⁸
46. Pursuant to Minnesota Rule 7850.3800, subpart 3A, EFP state permit manager Suzanne Steinhauer and public advisor Jamie MacAlister, were at the public hearing and described the alternative route permitting process, the proposed project, and introduced the EA and other relevant documents for the record.
47. Representatives from GRE present at the hearing included: Marcia Parlow, Transmission Permitting Analyst; Michelle Lommel, Senior Field Representative with GRE's Land Rights Department, and Chuck Lukkarila, Transmission Engineer.
48. Michael Kaluzniak, Planning Director, was at the public hearing on behalf of the Minnesota Public Utilities Commission.
49. Public comments on the proposed project were accepted by the ALJ until January 27, 2012.⁴⁹

⁴⁵ Ex. 13(Notice of Public Hearing with Certificate of Service) and 14(Notice of Public Hearing, certified letters to local officials).

⁴⁶ Ex. 15 (Published Notice of Public Hearing)

⁴⁷ Ex. 23 (Public Hearing Transcript).

⁴⁸ Ex. 24 (Administrative Law Judge Summary of Public Testimony [ALJ Report]).

⁴⁹ Ibid. at p. 3 (ALJ Report)

50. The public hearing transcript was filed by the Office of Administrative Hearings designated court reporter on January 23, 2012.⁵⁰
51. The ALJ filed the Summary of Public Testimony on February 24, 2012. The ALJ report contains a summary of oral public comments provided during the hearing and written comments received by the close of the comment period.⁵¹
52. During the public hearing, two members of the public presented their views regarding the proposed routing for the project. The ALJ received one written comment by the January 27, 2012, submittal deadline.⁵²

Summary of Oral Comments

53. George Sandy, a Little Falls Township Supervisor, asked whether it would be possible for the proposed project to parallel the existing Minnesota Power transmission line. Michelle Lommel from GRE explained that the Applicants had some reliability concerns about double circuiting the two lines. Mr. Sandy stated that he did not see any issue arising from construction of the proposed 115 kV line along existing roadway rights-of-way.⁵³
54. Duane Yorek, a landowner along the western portion of the project expressed concern about how much additional right-of-way would be required for the new line. A representative from GRE stated that in order to establish a centerline for the new 115 kV transmission line approximately 60 feet north of the existing Minnesota Power Line 46 was the Applicants' belief that the existing ROW would need to be widened by 10 to 20 feet to allow for sufficient room to construct and operate the new 115 kV transmission line.⁵⁴
55. Mr. Yorek also asked whether his field can be spanned, or whether poles would be in his field. Mr. Yorek stated that he believed the distance across the field from the edge of the wooded area to 180th Avenue is approximately 600 feet. A representative from GRE responded that GRE was aware that Mr. Yorek's desire was to span the field using single pole structures if possible but that, depending upon the survey, H-frame structures may be required to achieve the span.⁵⁵
56. Suzanne Steinhauer with EFP staff asked GRE to clarify the centerline of the requested route shown in Exhibit 20. GRE responded that for the portion of the route between the Minnesota Power Little Falls Substation and 180th Avenue the centerline of the route is the

⁵⁰ Ex. 23 (Public Hearing Transcript)

⁵¹ Ex. 24 (ALJ Report)

⁵² Ibid. at pp. 4-5

⁵³ Ibid. at p. 4

⁵⁴ Ibid., Ex. 23 at p. 25-28 (Public Hearing Transcript)

⁵⁵ Ex. 24, at p. 4 (ALJ Report), Ex. 23, at pp. 28-30 (Public Hearing Transcript)

proposed alignment; for the remainder of the route along road rights-of-way the centerline of the route is the centerline of the roads.⁵⁶

57. Ms. Steinhauer asked if it was the Applicants' intention to underbuild distribution facilities along 133rd Street/CR 256 and 195th Avenue. GRE stated that it was their intention to underbuild these facilities along these roads.⁵⁷

Summary of Written Comments

58. Jamie Schrenzel with the DNR submitted written comment concerning the proposed project. The DNR commented that the EA prepared for the project included necessary additional information in response to the comments that DNR has previously made. The DNR recommended measures it had described in earlier comment letter to minimize potential adverse impacts to Blanding's turtle, a state-listed threatened species. The DNR agreed with the placement of bird diverters as shown in Map B-10 of the EA and also recommended use of bird diverters along 180th Avenue, west of a public water wetland. The DNR also recommended the use of wildlife friendly erosion mesh if soil stabilization is necessary.⁵⁸

Environmental Assessment

59. The EA evaluated the route proposed by the Applicants in their Route Permit Application, and modified in the GRE filing of December 15, 2011.⁵⁹ The 115 kV line exits the east side of the Minnesota Power Little Falls Substation and continues east approximately 0.8 miles cross-country, before turning south for approximately 0.5 miles along (the east side of) 180th Avenue. When the route reaches County Road 256/133rd Street, the route turns east, following County Road 256/133rd Street for approximately 1.5 miles before tuning north along 195th Avenue for approximately 1.0 mile to the Crow Wing Power Little Falls Substation.⁶⁰ No alternative routes were identified during the scoping process and none were evaluated in the EA.⁶¹

Socioeconomic and Cultural Values

60. Socioeconomic effects would generally be positive providing a more stable and reliable supply of electricity and increasing the local tax base resulting from the incremental increase in revenues from utility property taxes.⁶²

⁵⁶ Ex. 23 at 17-19 (Public Hearing Transcript).

⁵⁷ Ex. 24 at p. 4 (ALJ Report), Ex. 23 at pp. 20-21 (Public Hearing Transcript).

⁵⁸ Ex. 24 at pp. 4-5 (ALJ Report), Ex. 22 (DNR Letter, January 27, 2012)

⁵⁹ Ex. 2 (Application), Ex. 12 (GRE Letter of December 15, 2011)

⁶⁰ Ex. 16 at p. 7 (EA)

⁶¹ Ex. 11 (Scoping Decision)

⁶² Ex. 16 at p. 19 (EA).

61. Construction of the project should result in small short-term positive economic impacts in the form of increased spending for lodging, meals and other consumer goods and services, as well as purchase of some construction material. Short-term economic impacts during the construction phase are most likely to be felt in Morrison County and particularly in Little Falls.⁶³
62. There is no indication that any minority of low-income population is concentrated in the project area. No disproportionate impacts on minority or low-income populations are anticipated.⁶⁴
63. Potential impacts to property values would typically be mitigated through negotiation in an easement agreement between the applicants and the landowner.⁶⁵

Displacement

64. The National Electric Safety Code (NESC) requires certain clearances between transmission line facilities and buildings for safe operation of the transmission line. Depending upon the location along the route, Applicants would acquire a transmission right-of-way of 52 to 120 feet for the project.⁶⁶
65. Displacement can occur when a structure is located within the proposed right-of-way for a transmission facility. The closest home to the route is approximately 110 feet from the center line of the project, allowing for an alignment that avoids displacement. No displacement of homes or businesses from the project is anticipated.⁶⁷

Aesthetics

66. The route crosses a mixture of cultivated fields, wooded areas, grassland and pastureland and scattered rural homesteads. There are two existing 115 kV transmission lines near the project with H-frame structures of 50 to 70 feet in heights. There are also overhead single pole distribution lines with structures of approximately 39 feet in height.
67. Applicants would install approximately 3.8 mile of single-circuit 115 kV structures. Applicants would install primarily single-pole wood structures with horizontal post insulators with heights of 60 to 85 feet and spans of 250 feet to 400 feet between structures.

⁶³ Ex. 16 at p. 19 (EA)

⁶⁴ Ibid. at p. 18

⁶⁵ Ibid. at p. 21

⁶⁶ Ibid. at p. 19

⁶⁷ Ibid. at pp. 19-20

In some areas, such as where a longer span is desired, wood H-frame structures may be used. GRE anticipates that the majority of angle structures would be guyed.⁶⁸

68. The last 2.5 miles of the route would underbuild existing distribution lines with the new structures.⁶⁹
69. Neither substation would be lighted. During emergencies mobile lights would be brought in to allow repairs to be made in safe working conditions for repair personnel.⁷⁰
70. The CWP Little Falls Substation would be expanded by approximately 5,000 square feet. Applicants would install a dead-end structure of approximately 60 feet and a static pole of up to 100 feet, other equipment installed at the substation would be 40 feet in height or less.⁷¹
71. The project will be visible to residents in the project area as well as those travelling along county and township roads.⁷²
72. Although the transmission line would be visible throughout most of its length, it is not incompatible with its setting amongst existing transmission and distribution lines and substations, highways, farms, and rural residences.
73. HVTL permits require Permittees to minimize the number of trees to be removed to the extent that such actions do not violate sound engineering principles or system reliability criteria. Certain low and slow growing species that do not exceed a mature height of 15 feet can be planted in the right-of-way to blend the difference between the right-of-way and adjacent wooded areas.

Noise

74. The Minnesota Pollution Control Agency (MPCA) has established standards for the regulation of noise levels. The most stringent noise standards are 60 A-weighted decibel (dBA) L₅₀ during the daytime and 50 dBA L₅₀ during the nighttime.⁷³
75. Construction activities would need to comply with MPCA noise standards. Construction work would generally be limited to daytime hours, between 7 a.m. and 10 p.m.; occasional construction may be scheduled outside these hours or on weekends if necessary to work

⁶⁸ Ex. 16 at p. 21 (EA)

⁶⁹ Ex. 24 at p. 4 (ALJ Report)

⁷⁰ Ex. 16 at p. 21 (EA)

⁷¹ Ibid. at p. 21

⁷² Ibid.

⁷³ Ibid.

around customer schedules or line outages. Heavy equipment would be equipped with sound attenuation devices such as mufflers to minimize noise levels.⁷⁴

76. Noise associated with substation operation includes the operation of transformers and switchgear. Transformers produce a constant low-frequency humming noise while switchgear produces an impulsive or short duration noise. Applicants would install one 115 to 12.5 kV transformer at the CWP Little Falls Substation, no transformers would be installed at the Minnesota Power Little Falls Substation.⁷⁵
77. The nearest home to the CWP Little Falls Substation is located approximately 1,485 feet north of the substation. Estimated noise from the substation at the nearest home would be approximately 16 dBA.⁷⁶
78. Applicants estimate that noise generated from the transmission line and associated facilities to be no more than 18.8 dBA L₅ directly under the line and 17.7 dBA L₅ at the edge of the right-of-way, which is below typical ambient levels and the most stringent Noise Area Classification level of 50 dB(A) L₅₀ established by the MPCA.⁷⁷

Public Health and Safety

79. The Applicants will ensure that all safety requirements meet NESC standards during the construction and operation of the project.⁷⁸
80. The project would be designed in compliance with local, state, NESC, and GRE/Minnesota Power standards for clearance to ground, crossing utilities and buildings, strength of materials, and right-of-way widths, and permit requirements.⁷⁹
81. The transmission line would be equipped with protective devices to safeguard the public if an accident occurs. The protective equipment is designed to de-energize the transmission line should such an event occur.⁸⁰
82. Substations will be fenced and accessible only by authorized personnel.
83. The issue of electric and magnetic fields was discussed in the environmental assessment.⁸¹ A number of national and international health agencies (the Minnesota Department of

⁷⁴ Ex. 16 at p. 24 (EA)

⁷⁵ Ibid.

⁷⁶ Ibid.

⁷⁷ Ibid. at pp. 23-24

⁷⁸ Ex. 2 at p. 8-2 (Application)

⁷⁹ Ibid.

⁸⁰ Ibid.

Health, the World Health Organization, the National Institute of Environmental Health Sciences) have concluded in their research that there is insufficient evidence to prove a connection between electric and magnetic field exposures and health effects. Research has not been able to establish a cause and effect relationship between exposure to magnetic fields and human disease, nor a plausible biological mechanism by which exposure to electric and magnetic fields could cause disease.⁸²

84. Applicants have calculated magnetic fields for this project under average and emergency load conditions. Emergency load conditions would occur in rare instances where one transmission line fails and the load normally carried by the line experiencing failure is shifted to another line. The line carrying the additional electrical load is then said to be operating under emergency load conditions.⁸³ Under average load conditions, estimated magnetic fields at one meter above the ground and directly beneath the transmission line range from approximately 6 to 14 milligauss depending upon structure type. Under emergency load conditions, estimated magnetic fields range from approximately 73 to 297 miligauss depending upon structure type.⁸⁴ No Minnesota regulations have been established pertaining to magnetic fields from high-voltage transmission lines.⁸⁵
85. The absence of any demonstrated impact by electric field and magnetic field exposure supports the conclusion that there is no demonstrated impact on human health and safety. No adverse effects from electric fields and magnetic fields on health are expected for persons living or working at locations along or near the proposed Project.⁸⁶
86. The electric field from a transmission line in some instances can reach a nearby conductive object, such as a vehicle or a metal fence, which is in close proximity to the transmission line. This may induce a voltage on the object, which is dependent on many factors, including the weather conditions, object shape, size, orientation, capacitance and location along the right-of-way. If a voltage is induced on an object insulated from the ground and a person touches the object, a small current (induced voltage) would pass through their body to the ground. Most shocks from induced current are considered more of a nuisance than a danger. The Minnesota Public Utilities Commission electric field limit of 8 kV/m was designed to prevent serious hazard from shocks due to induced voltage under transmission lines. The NESC sets an induced current limit of five milliamps (mA) for objects under transmission lines. Proper grounding of metal objects under and/or adjacent to the transmission line is the best method of avoiding these shocks.⁸⁷

⁸¹ Ex. 16 at pp. 25-35 (EA)

⁸² Ibid.

⁸³ Ibid. at p. 31

⁸⁴ Ibid. at p. 32, Table 13

⁸⁵ Ibid. at p. 27, Table 9

⁸⁶ Ibid. at p. 33

⁸⁷ Ibid. at p. 34

87. Stray voltage is an extraneous voltage that appears on grounded surfaces in buildings, barns and other structures, including utility distribution systems. Sources of stray voltage include a variety of on-farm wiring and grounding problems and off-farm problems related to connections on the electric distribution system. Sometimes a small voltage can develop at these grounding points and flow through the earth. This voltage is called a neutral-to-earth voltage (NEV). More precisely, stray voltage is a small voltage that is measured between two points that animals such as livestock can simultaneously come into contact with. When an animal simultaneously contacts these points a small current will flow through the animal (Fick and Surbrook, n.d.). These NEV currents may contribute to an excess of acceptable current in a livestock contact area on an adjoining farm. As such, stray voltage has primarily been raised as a concern on dairy farms because it may impact operations and milk production. Stray voltages are low-level voltages and should be distinguished from shocks felt by humans. Stray voltages are not lethal.⁸⁸
88. Stray voltage is by and large an issue associated with electrical distribution lines. Transmission lines do not create stray voltage as they do not directly connect to businesses, residences, or farms.⁸⁹
89. Stray voltage (NEV) sources can be reduced in three fundamental ways: reduce the current flow on the neutral system; reduce the resistance of the neutral system; or improve the grounding of the neutral system. Making good electrical connections and making sure that these connections are maintained by the proper choice of wiring materials for wet and corrosive locations will reduce the resistance of the grounded neutral system and thereby reduce NEV levels.⁹⁰
90. HVTL permits issued by the Commission require that all fixed metallic objects on or off the right-of-way, except electric fences that parallel or cross the right-of-way, will be grounded to the extent necessary to limit the induced short circuit current between ground and the object and to comply with the ground fault conditions specified in the NESC.
91. Implantable medical devices such as pacemakers, defibrillators, neurostimulators, and insulin pumps may be subject to interference from strong electric and magnetic fields. Most of the research on electromagnetic interference and medical devices is related to pacemakers. According to a 2004 Electric Power Research Institute (EPRI) report, implantable cardiac devices are much more sensitive to electric fields than to magnetic fields. In the report, the earliest interference from magnetic fields in pacemakers was observed at 1,000 mG, far greater than the magnetic fields associated with high-voltage transmission lines.⁹¹

⁸⁸ Ex. 16 at p. 33 (EA)

⁸⁹ Ibid. at p. 34

⁹⁰ Ibid.

⁹¹ Ibid. at pp. 34-35

92. Medtronic and Guidant, manufacturers of pacemakers and implantable cardioverter/defibrillators, have indicated that electric fields below 6 kV/m are unlikely to cause interactions affecting operation of modern bipolar devices. Older unipolar designs; however, are more susceptible to interference from electric fields with research suggesting that the earliest evidence of interference occurred in electric fields ranging from 1.2 to 1.7 kV/m. These initial interaction levels are higher than 1.013 kV/m maximum electric field predicted for this project. The risk of interference inhibition of unipolar cardiac pacemakers from high-voltage power lines in everyday life is small.⁹²

Air Quality

93. There is minimal air quality impacts associated with transmission line operation. The only potential air emissions for a transmission line result from corona. Studies designed to monitor the production of ozone under transmission lines have been unable to detect any increase attributable to the transmission line facility, in accordance with state and federal guidelines (0.075 parts per million [ppm] and 0.08 ppm, respectively).⁹³
94. Calculations according to the Bonneville Power Administration Corona and Field Effects Program Version 3 for a standard single-circuit 115 kV project predicted a maximum concentration of 0.006 ppm near the conductor and 0.002 ppm at one meter above ground during foul weather or worst case conditions with rain at one inch per hour.⁹⁴
95. Air quality impacts caused by construction vehicle emissions and fugitive dust from right-of-way clearing and construction are expected to occur, but will be temporary and limited.⁹⁵
96. Temporary impacts due to construction vehicle emissions and fugitive dust would be minimized by using best management practices to reduce dust emissions. Tracking control practices and wetting of roads and temporary roads would be done to control fugitive dust. Proper maintenance of the contractor's equipment would be done to prevent excessive emissions.⁹⁶
97. There would be no anticipated permanent impacts on air quality as a result of the proposed project.

⁹² Ex. 16 at p.36 (EA)

⁹³ Ibid.

⁹⁴ Ibid.

⁹⁵ Ibid.

⁹⁶ Ibid.

Transportation and Utilities

98. The project area is served by township and county roads. The project would parallel township and county roads (180th Avenue, County Road 256, 133rd Street and 195th Avenue) for approximately 79 percent of the project length.⁹⁷
99. Delivery of project components, such as poles and conductors, may have temporary impacts along county roads. Construction crews may use portions of the road shoulder while poles are installed and conductors are strung. During construction temporary guard or clearance poles would be installed at crossings to ensure adequate clearance over other utilities, streets, roads, highways, or other manmade infrastructure.⁹⁸
100. The CWP Little Falls Substation is located on the southeast corner of the intersection of Minnesota Highway 27 and 195th Avenue. Applicants will expand the CWP Little Falls Substation to the south by approximately 5000 square feet.⁹⁹ The substation expansion will not encroach upon MnDOT right-of-way.
101. Depending upon final design Applicants may seek to either move or add an additional access point to the CWP Little Falls Substation further south along 195th Avenue. Access to the CWP Little Falls Substation from Minnesota Highway 27 is not required for the project.¹⁰⁰
102. Any change in access to the CWP Little Falls Substation would require approval from Morrison County.¹⁰¹
103. Applicants will notify MnDOT, County, and township road authorities to inform them of construction plans and ensure that all necessary permits are obtained and traffic impacts are minimized. During construction Applicants will install temporary guard or clearance poles at road crossings to ensure adequate clearance is maintained over other utilities, roads, or highways. Applicants will use traffic safety signage and flaggers as necessary during construction activities to minimize traffic disruption and ensure public safety. Guard structures, such as temporary wood poles with a cross arm or line trucks with booms, can be used to protect traffic lanes.¹⁰²
104. There are no railroads in the project area. The nearest airport is the Little Falls/Morrison County – Lindbergh Field Airport, a public airport serving mostly general aviation, located

⁹⁷ Ex. 16 at p. 36 (EA)

⁹⁸ Ibid.

⁹⁹ Ibid. at pp. 15, 36

¹⁰⁰ Ibid. at p. 37

¹⁰¹ Ibid.

¹⁰² Ibid.

approximately two miles southwest of the project. It is not anticipated that the project would impact air traffic.¹⁰³

105. CWP provides electrical service to the project area. The project will not change electric service, but will increase reliability of the electric transmission grid.¹⁰⁴ As part of the project, Applicants intend to relocate existing CWP overhead and underground electric distribution lines along 133rd Street/County Road 256 and 195th Avenue to new underbuild structures.¹⁰⁵

106. The project will cross two parallel eight-inch Northern Natural Gas pipelines at two points along its route; approximately 1,000 feet north of County Road 256/133rd Street and again approximately 1,000 feet south of the CWP Little Falls Substation. When a high-voltage alternating current transmission line is located adjacent to a pipeline ROW, the pipeline may be subject to electric and magnetic induction if there are flaws in the pipeline coating. This induction has the potential to cause corrosion in the pipeline.¹⁰⁶

107. GRE will perform tests to identify any potential corrosion issues to the pipeline that may occur as a result of the project. Based on the results of the tests, GRE will work with Northern Natural Gas to identify appropriate mitigation measures to ensure that the pipeline is properly grounded.¹⁰⁷

108. The Applicants will not install water or wastewater facilities at either substation.¹⁰⁸

109. Construction of the project is not anticipated to directly or indirectly impact the area transportation corridors, airports, emergency infrastructure, or utilities.

Zoning and Compatibility

110. The project is located in an area designated as Agricultural (AG) by Morrison County Zoning Ordinance. The project would be exempt from a Conditional Use Permit under the county zoning ordinance. Other than a loss of some agricultural land, as discussed in Finding 117, no impacts to land use or zoning are anticipated.¹⁰⁹

¹⁰³ Ex. 16 at p. 37 (EA)

¹⁰⁴ Ibid.

¹⁰⁵ Ex. 24 at 4 (ALJ Report)

¹⁰⁶ Ex. 16 at 37 (EA)

¹⁰⁷ Ibid.

¹⁰⁸ Ibid.

¹⁰⁹ Ibid. at pp. 37-38

Recreation and Tourism

111. The Popple Lake Wildlife Management Area (WMA) is located approximately 1,500 feet west of the Minnesota Power Little Falls Substation. The Popple Lake WMA comprises approximately 223 acres and is primarily a wetland area with cattails, low land grass and brush, with some oak woods along its edges. There is no public access to the WMA, access is available by contacting Minnesota Power to request access to the WMA through the substation property.¹¹⁰
112. The Platte River Trail System is approximately one mile south of the Route, and the Soo Line ATV trail is approximately three miles south of the route.¹¹¹
113. Direct impacts on existing recreational opportunities within the proposed project location will be avoided because the Route will not cross these areas.¹¹²
114. At a distance of one to three miles, visual impacts to the recreational uses along the identified trails would be minimal.¹¹³
115. No impacts on recreation resources are anticipated from the proposed project.¹¹⁴

Land Based Economies

116. Approximately 92 percent of the route crosses areas of cultivated agricultural land and approximately 5 percent of the route crosses pasture, hay and grassland. The area in which the CWP Little Falls Substation will be expanded has most recently been planted in alfalfa.¹¹⁵
117. The project would result in permanent and temporary impacts to agricultural land. Permanent impacts will occur where structures are placed, resulting in loss of approximately 30 square feet around each structure placement. Approximately 1900 square feet, or 0.04 acres, along the route would be permanently impacted by transmission structures and an additional impact of approximately 0.1 acres from the expansion of the CWP Little Falls Substation.¹¹⁶
118. Temporary impacts, such as soil compaction, disruption of agricultural practices, and crop damage within the right of way are likely to occur during construction. Construction of the

¹¹⁰ Ex. 16 at p. 38 (EA)

¹¹¹ Ibid.

¹¹² Ibid.

¹¹³ Ibid.

¹¹⁴ Ibid. at p. 39

¹¹⁵ Ibid. at p. 38

¹¹⁶ Ibid. at p. 39

new transmission structures and removal of existing distribution structures will require repeated access to install foundations, structures and conductors. Impacts would originate from the various construction vehicles required to install the transmission line and structures, and may result in rutting and compaction of soil and farm fields.¹¹⁷

119. Applicants anticipate that the majority of construction activity will occur within the easements acquired for the route. If needed, a temporary storage area outside of the easement area would be leased for the duration of construction to provide for storage of material and equipment.¹¹⁸

120. According to information on aggregate resources maintained by MnDOT, two active aggregate pits are located across Minnesota Highway 27, northwest of the CWP Little Falls Substation. The project would not impede access to or otherwise impact these resources.¹¹⁹

121. Although the route crosses some wooded areas where landowners may occasionally sell timber there are no federal, state, or locally designated forests or commercial logging operations located along the route.¹²⁰

Geology and Soils

122. Excavations for the substation and transmission structures are anticipated to be approximately 10 to 30 feet in depth. No geologic impacts are anticipated from the project.¹²¹

123. Temporary short-term disturbance of soils would result from site clearing and excavation activities at the CWP substation, structure locations, pulling and tensioning sites, setup areas and during transport of crews, machinery, materials and equipment over access routes primarily along transmission right-of-way.¹²²

124. If construction activities require disturbing more than one acre of soil Applicants will apply for a National Pollutant Discharge Elimination System (NPDES) construction stormwater permit from the MPCA and would prepare a Stormwater Pollution Prevention Plan (SWPPP).

¹¹⁷ Ex. 16 at p. 39 (EA)

¹¹⁸ Ibid.

¹¹⁹ Ibid.

¹²⁰ Ibid., Ex. 23 at p. 26 (Hearing Transcript)

¹²¹ Ex. 16 at p. 40 (EA)

¹²² Ibid. at p. 41

125. Erosion control methods and BMPs pursuant to MPCA requirements will be utilized to protect topsoil and minimize erosion during construction.¹²³
126. Applicants will minimize soil erosion by using mulch in areas that need immediate cover and re-vegetating soils as soon as possible after disturbance. Mulch may be applied to form a temporary and protective cover on exposed soils. Mulch can help retain moisture in the soil to promote vegetative growth, reduce evaporation, insulate the soil, and reduce erosion. A common mulch material used is hay or straw. Re-vegetation is usually accomplished by seeding of species native to the area.¹²⁴ MnDOT and the DNR have researched various seed mixes and have identified mixes for specific site characteristics and uses.
127. Areas disturbed during construction will be repaired and restored to pre-construction contours so that all surfaces drain naturally, blend with the natural terrain, and are left in a condition that will facilitate re-vegetation, provide for proper drainage, and prevent erosion.¹²⁵

Water and Wetland Resources

128. Applicants do not plan to install any wells as part of the project. Excavations required for transmission structures and substation modifications are expected to be 10 to 30 feet deep. Wells in the project area range in depth from 70 to 125 feet. No groundwater impacts are anticipated from the project.¹²⁶
129. The route does not cross any Public Waters lakes, rivers, streams, ditches or riparian areas. The route does not cross any areas identified as shoreland overlay districts by Morrison County. No direct impacts to surface waters or shoreland areas are expected.¹²⁷
130. Indirect impacts to surface water resources from construction of the project could include sedimentation reaching surface waters during construction due to ground disturbance by excavation, grading, and construction traffic.¹²⁸
131. Applicants have committed to maintaining sound water and soil conservation practices during construction and operation of the project to protect surface water resources. Practices may include containment of stockpiled material away from stream banks and lake shorelines; stockpiling and re-spreading topsoil; and re-seeding disturbed areas.¹²⁹

¹²³ Ex. 2, at p. 8-19 (Application) , Ex. 16 at p. 41 (EA)

¹²⁴ Ex. 2, at p. 8-23 (Application)

¹²⁵ Ibid. at p. 8-13

¹²⁶ Ex. 16 at pp. 41-42 (EA)

¹²⁷ Ibid. at p. 42

¹²⁸ Ibid. at p. 42

¹²⁹ Ibid. at p. 43

132. Applicants will implement Erosion and sediment control methods and BMPs pursuant to MPCA requirements will be utilized to protect surface water resources from runoff and sedimentation during construction.¹³⁰
133. In addition to erosion control measures, fueling and lubricating of construction equipment away from waterways would ensure that fuel and lubricants do not enter waterways.¹³¹
134. As discussed in Finding 124, if the project disturbs more than one acre, Applicants will apply for an NPDES construction stormwater permit from the MPCA and prepare a SWPPP. If the project disturbs less than one acre, Applicants can identify the BMPs employed to minimize impacts to soils and the potential for erosion minimized in a Soil Erosion and Sediment Control Plan.
135. National Wetland Inventory (NWI) developed by the United States Fish and Wildlife Service (USFWS) shows a large wetland complex south of 133rd street extending into the Rice-Skunk WMA and crossing the project at several points along 133rd street. The route does not cross any Public Water Inventory wetlands.¹³²
136. Applicants intend to avoid pole placement in wetlands to the extent possible by spanning wetlands along the route. Applicants will design the route to locate poles outside of NWI wetlands. If soil survey information at pole locations indicates wetland soils, Applicants will attempt to adjust pole locations to span wetlands to the extent possible.¹³³
137. If a Regional General Permit under Section 404 of the Clean Water Act is required from the United States Corps of Engineers, Applicants will restore wetlands as required by the Corps and comply with the requirements of the Wetland Conservation Act.¹³⁴
138. Applicants have agreed to minimize potential impacts to wetlands by locating staging and stringing areas outside of and not adjacent to wetlands or water resources, spanning wetlands to the greatest extent possible, assembling structures on upland areas before bringing them to the site for installation; having construction crews access wetland areas with the least amount of physical impact to wetlands; and use of construction mats (wooden mats or a composite mat system) during construction in wetland areas.¹³⁵

¹³⁰ Ex. 2, at p. 8-19 (Application) and Ex. 16 at p. 43 (EA)

¹³¹ Ex. 16 at p. 43 (EA)

¹³² Ibid.

¹³³ Ibid. at p. 44 (EA)

¹³⁴ Ibid.

¹³⁵ Ibid.

139. The proposed project is not located within floodplains or floodways mapped by Federal Emergency Management Agency (FEMA) and would not impact the function of any floodplains.¹³⁶

Archaeological and Historic Resources

140. A background research and literature review commissioned by the Applicants did not identify any archaeological site or documented standing structure within a one-mile buffer of the proposed route. The Minnesota State Historic Preservation Office (SHPO) reviewed the report and other available information and concluded that no known or suspected archaeological properties in the area will be affected by the project.¹³⁷ The project avoids historic architectural properties and known archaeological properties.¹³⁸

141. In the event of an unanticipated discovery of cultural resources during project construction, HVTL permits require permittees to stop construction activities and consult with a professional archaeologist and the SHPO to determine the proper course of action. If a cultural resource or feature is determined to be potentially eligible for listing on the National Register of Historic Places, it will be avoided or mitigated before construction can resume.¹³⁹

Flora (Plant life)

142. Vegetation along the route is currently dominated by agricultural uses including cultivated fields, pockets of upland deciduous forest, shrubby grasslands, grasslands and wetlands.¹⁴⁰

143. Applicants anticipate that approximately 3.6 acres of trees would be permanently removed to construct and operate the project.¹⁴¹

144. Approximately 79 percent of the route is located immediately adjacent to existing road rights-of-way, minimizing the width of right-of-way required.¹⁴²

Fauna (Wildlife)

145. Wildlife within the project area consists primarily of deer, small mammals, waterfowl, raptors, and perching birds. These species are typical of the land use in the project area.¹⁴³

¹³⁶ Ex. 16 at p. 44 (EA)

¹³⁷ Ex. 4 (SHPO response letter)

¹³⁸ Ex. 16, at p. 46 (EA)

¹³⁹ Ibid. at p. 47

¹⁴⁰ Ibid. at p. 44

¹⁴¹ Ibid.

¹⁴² Ibid. at p. 45

¹⁴³ Ibid.

146. During construction, wildlife could temporarily be displaced and small amounts of habitat could be lost from the project area. Similar forested and agricultural habitats are found adjacent to the route. These species would only be displaced a short distance and would not incur population level effects due to construction of the transmission line. No permanent impacts to wildlife populations are anticipated.¹⁴⁴
147. The primary impact presented to fauna by transmission lines is the potential for injury and death of raptors, waterfowl, and other large bird species.¹⁴⁵
148. Electrocutation can occur when birds with large wingspans come in contact with two conductors or with a conductor and a grounding device. The electrocution of large birds, such as raptors, is more commonly associated with small distribution lines than large transmission lines. The Applicants' transmission line design standards provide adequate spacing to eliminate the risk of raptor electrocution and will minimize potential avian impacts from the project.¹⁴⁶
149. Avian collisions are also a recognized possibility with the construction and placement of a new transmission line. Collision frequency may increase when a new transmission line is located between feeding and resting areas such as, agricultural fields, wetlands, or open water.¹⁴⁷
150. The USFWS and DNR both recommend installation of bird flight diverters along the transmission line to minimize the potential for avian collision. In most cases, the shield wire of an overhead transmission line is the most difficult part of the structure for birds to see.¹⁴⁸ After consultation with the DNR, Applicants will install Swan Flight Diverters, pre-formed spiral shaped devices made of polyvinyl chloride that are wrapped around the shield wire, every 25 feet along 180th Avenue and portions of 133rd Street/County Road 256 and 195th Avenue.

Rare and Unique Natural Resources

151. No rare or unique flora features along the route. No impacts to identified native plant communities or sensitive plant species are anticipated.¹⁴⁹
152. Blanding's turtle, listed as threatened at the state level, have been reported in the project area.¹⁵⁰

¹⁴⁴ Ex. 16 at p. 45 (EA)

¹⁴⁵ Ibid.

¹⁴⁶ Ibid.

¹⁴⁷ Ibid.

¹⁴⁸ Ibid.

¹⁴⁹ Ibid. at p. 44

¹⁵⁰ Ibid. at p. 45

153. The USFWS indicated that there are no federally-listed or proposed species and/or designated or proposed critical habitat within the action area of the proposed project.¹⁵¹

154. Impacts to the Blanding's turtle can be avoided or minimized by adopting the mitigation measures recommended by the DNR, which include, but are not limited to, the following:

- A flyer with an illustration of a Blanding's turtle will be given to all contractors working in the area. Homeowners will also be informed of the presence of Blanding's turtles in the area;
- Turtles which are in imminent danger will be moved, by hand, out of harm's way. Turtles which are not in imminent danger will be left undisturbed;
- If a Blanding's turtle nest is in a yard, it will not be disturbed. Silt fencing will be set up to keep turtles out of construction areas. Silt fencing will be removed after the area has been re-vegetated;
- Small, vegetated temporary wetlands (Types 2 & 3) will not be dredged, deepened, filled, or converted to storm water retention basins (these wetlands provide important habitat during spring and summer);
- Wetlands will be protected from pollution; use of fertilizers and pesticides will be avoided, and run-off from lawns and streets will be controlled. Erosion will be prevented to keep sediment from reaching wetlands and lakes; and
- Vegetation management in infrequently mowed areas, such as in ditches, along utility access roads, and under power lines, will be done mechanically (chemicals will not be used). Work will occur fall through spring (after October 1st and before June 1st).¹⁵²

Interference

155. Corona from transmission line conductors can generate electromagnetic "noise" in the radio frequency range. This noise may cause broadband interference at the same frequencies that many communication and media signals are transmitted. This noise can cause interference with the reception of these signals depending on the frequency and strength of the signal. Loose hardware on the transmission line may also cause interference.¹⁵³

156. Digital and satellite television are expected to have little interference from corona generated noise. Line of site for satellite television users could be obstructed by a transmission line structure. Line of site can usually be restored by moving the consumer satellite dish to a slightly different location.¹⁵⁴

¹⁵¹ Ex. 16 at p. 45 (EA).

¹⁵² Ibid. at p. 46

¹⁵³ Ibid. at p. 47

¹⁵⁴ Ibid. at pp. 47-48

157. Wireless internet and cellular phones are not expected to be impacted by the proposed project.¹⁵⁵

158. AM radio frequency interference typically occurs immediately under a transmission line and dissipates rapidly to either side. If radio interference from transmission line corona does occur, satisfactory reception from AM radio stations can be restored by appropriate modification of (or addition to) the receiving antenna system.¹⁵⁶

159. Corona-generated noise from transmission lines could be a source of interference for global positioning systems (GPS). Any transmission line structure that is placed in an agricultural field would have GPS coordinates that may be added to the farmer's GPS unit coordinates. However, if the GPS unit is not configured to accept new coordinates, the user would have to manually divert around any structures placed in fields. There are also specialty antennas that can be connected to existing GPS-based systems that will increase reception.¹⁵⁷

Certificate of Need

160. Pursuant to Minnesota Statute 216B.243, subdivision 2, "No large energy facility shall be sited or constructed in Minnesota without the issuance of a certificate of need by the Commission." In the case of a high-voltage transmission line, a large energy facility is defined as, (1) any high-voltage transmission line with a capacity of 200 kV or more and greater than 1,500 feet in length, and (2) any high-voltage transmission line with a capacity of 100 kV or more with more than ten miles of its length in Minnesota or that crosses a state line.

161. The project does not meet the criteria for a "large energy facility" because, although it has a capacity in excess of 100 kV, it is less than 10 miles long.

Summary of Human and Environmental Impacts and Commitment of Resources

162. The route analyzed in the EA has human and environmental impacts, some of which are unavoidable if the project is permitted and built. Construction of the project will generate temporary noise impacts during the construction phase, new and incrementally taller transmission line structures and an expanded CWP Little Falls Substation would change the viewshed experienced by residents and travelers in the project area, a new or additional driveway to the CWP Little Falls Substation may be installed along 195th Avenue, approximately 0.1 acres of land would be removed from agricultural production, and approximately 3.6 acres of trees would be removed to construct and operate the project.¹⁵⁸

¹⁵⁵ Ex. 16 at p. 48 (EA)

¹⁵⁶ Ibid. at p. 47

¹⁵⁷ Ibid. at p. 48

¹⁵⁸ Ibid. at pp. 50-51

163. There are few commitments of resources associated with this project that are irreversible and irretrievable, but those that do exist are primarily related to construction. Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects that the use of these resources have on future generations. Irreversible effects primarily result from the use or destruction of a specific resource that cannot be replaced within a reasonable time frame. Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the action. Construction resources that would be used include aggregate resources, concrete, steel, and hydrocarbon fuel.

Applicable Statutory Conditions

164. Minnesota Statute §216B.243, subdivision 2, states that no large energy facility shall be sited or constructed in Minnesota without the issuance of a certificate of need by the Commission. Minnesota Statute §216B.2421, subdivision 2(3) defines a “large energy facility” as any high voltage transmission line with a capacity of 100 kV or more with more than ten miles of length or that crosses a state line.

165. Minnesota Statute §216E.03, subdivision 7, and Minnesota Rule 7850.4100 provides considerations in designating sites and routes and determining whether to issue a permit for a large electric power generating plant or a high-voltage transmission line.

Based on the Findings of Fact the Commission makes the following:

CONCLUSIONS OF LAW

1. Any of the foregoing Findings more properly designated as Conclusions are hereby adopted as such.
2. The Public Utilities Commission has jurisdiction over the subject matter of this proceeding pursuant to Minnesota Statute §216E.03, subdivision 2.
3. The project qualifies for review under the alternative permitting process of Minnesota Statute §216E.04 and Minn. Rules 7850.2800.
4. The Applicants, the Department of Commerce, and the Public Utilities Commission have complied with all procedural requirements required by law.
5. The Department of Commerce has completed an EA of this project as required by Minnesota Statute §216E.04, subdivision 5, and Minnesota Rule 7850.3700.

6. The Public Utilities Commission has considered all the pertinent factors relative to its determination of whether a route permit should be approved as required by Minnesota Statute §216E.03, subdivision 7, and Minnesota Rule 7850.4100.
7. The conditions included in the route permit are reasonable and appropriate.

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

ORDER

1. A route permit for the Proposed Route, as requested in the route permit application, is hereby issued to Great River Energy and Minnesota Power to construct approximately 3.8 miles of new 115 kV overhead transmission line to be located Little Falls Township in Morrison County, Minnesota. This includes modifications and upgrades to existing substations and associated facilities that are part of the project.
 - a. The 115 kV transmission line exits the east side of the Minnesota Power Little Falls Substation and continues east approximately 0.8 miles cross-country, before turning south for approximately 0.5 miles along (the east side of) 180th Avenue. When the route reaches County Road 256/133rd Street, the route turns east, following County Road 256/133rd Street for approximately 1.5 miles before tuning north along 195th Avenue for approximately 1.0 mile to the Crow Wing Power Little Falls Substation.
 - b. The route width for the entire length of the transmission line is 300 feet, 150 feet on each side of the proposed alignment between the Minnesota Power Little Falls Substation and 180th Avenue; 150 feet on either side of 180th Avenue, 133rd Street/County Road 256, and 195th Avenue.
2. The route permit shall be issued in the form attached hereto, with a map showing the approved route.

BY ORDER OF THE COMMISSION

Burl W. Haar,
Executive Secretary

-BLANK-

In the Matter of the Route Permit
Application for the Little Falls 115 kV
Transmission Line Project

Exhibit List

PUC Docket: ET-2, E015/TL-11-318

Exhibit No.	Author	Description	Received Date	eDocket Document Number
1	Applicant	Notification of intent to file pursuant to alternative process	April 11, 2011	20114-61173-01
2	Applicant	HVTL Route Permit Application	June 16, 2011	20116-63715-01 20116-63715-02 20116-63715-03 20116-63715-04 20116-63715-05
3	Applicant	Notice of Application Filing, affidavits of service (June 29, 2011) and Affidavit of Publication in the <i>Morrison County Record</i> (July 26, 2011)S	June 29, 2011, July 22, 2011, and July 26, 2011	20116-64201-01 20116-64206-01 20117-64510-01 20117-64599-01
4	Applicant	SHPO response to Westwood letter on Survey Recommendations	July 22, 2011	20117-64490-01
5	EFP	EFP staff comments and recommendations to the Commission on application acceptance	July 27, 2011	20117-64661-01
6	Commission	Order of Application Acceptance	August 8, 2011	20118-65140-01
7	EFP	Notice of Public Scoping Meeting (with Affidavit of Service)	August 18, 2011	20118-65513-01
8	Applicant	Notice of Public Scoping Meeting (with Affidavit of Publication) –August 28, 2011	January 9, 2012	20121-70076-01
9	EFP	Public Comments (oral) made at the information/scoping meeting September 7, 2011	October 4, 2011	201110-66937-01
10	EFP	Public Comments (written) received during scoping comment period	October 4, 2011	201110-66934-01

Exhibit No.	Author	Description	Received Date	eDocket Document Number
11	DOC	DOC Deputy Director's Scoping Decision (with Certificate of Service)	October 7, 2011, and October 10, 2011 (corrected service list)	201110-67109-01 201110-67182-01
12	Applicants	Letter advising Commission on status of Minnesota Power Line 46	December 15, 2011	201112-69270-01
13	EFP	Notice of Public Hearing (with Certificate of Service)	December 22, 2011	201112-69530-01
14	EFP	Notice of Public Hearing (with certified letters to Local Governments, sent December 22, 2011)	January 10, 2012	20121-70121-01
15	Applicants	Notice of Public Hearing (with Affidavit of Publication, December 25, 2011)	January 9, 2012	20121-70078-01
16	EFP	Environmental Assessment	January 5, 2012	20121-69953-01 20121-69953-02
17	EFP	Notice of Availability of EA (with Certificate of Service)	January 5, 2012	20121-69952-01
18	EFP	Notice of Availability of EA in the <i>EQB Monitor</i> (January 9, 2012)	January 10, 2012	20121-70120-01
19	Applicants	Maps showing proposed alignment	January 11, 2012	20121-70160-01
20	Applicants	Map showing route width	January 11, 2012	20121-70184-02
21	Applicants	Proposed Project structures	January 11, 2012	20121-70184-01
22	Public	DNR Comments to Judge Johnson	January 27, 2012	20122-71617-01
23	OAH	Transcript of Public Hearing	January 23, 2012	20121-70562-01
24	OAH	ALJ Summary	February 24, 2012	20122-71860-01