

July 14, 2011

VIA HAND DELIVERY

Mr. Darrell Nitschke
Executive Secretary
North Dakota Public Service Commission
600 E. Boulevard, Dept. 408
Bismarck, ND 58505-0480

RECEIVED

JUL 14 2011

PUBLIC SERVICE COMMISSION

**RE: Minnkota Power Cooperative, Inc.
345 kV Transmission Line – Center
to Grand Forks – Siting Application
Case No. PU-09-670**

Dear Mr. Nitschke:

Please find enclosed herewith for filing the original and ten copies of the proposed Findings of Fact, Conclusions of Law and Order for the above-referenced matter.

Also enclosed is a CD containing the above-referenced document in PDF format.

Should you have any questions, please do not hesitate to contact me.

Sincerely,



MOLLIE M. SMITH

MMS/tsv

Enclosures

cc: Mr. Gerad Paul (w/encl. – via e-mail)
Mr. Mike Hennes (w/encl. – via e-mail)
Mr. John Graves (w/encl. – via e-mail)
Mr. Wally Lang (w/encl. – via e-mail)
Mr. Brian Hunker (w/encl. – via e-mail)

4959455_1.DOC

Attorneys & Advisors
main 701.221.4020
fax 701.221.4040
www.fredlaw.com

Fredrikson & Byron, P.A.
200 North T
Bismarck, Nc 69
58501-3879

Filed: 7/14/2011 Pages: 12
Proposed Findings of Fact, Conclusions of Law and Order

**STATE OF NORTH DAKOTA
PUBLIC SERVICE COMMISSION**

**Minnkota Power Cooperative, Inc.
345 kV Transmission Line – Center to Grand Forks
Siting Application**

Case No. PU-09-670

FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER

July __, 2011

Appearances

Commissioners Tony Clark, Kevin Cramer, Brian P. Kalk.

Mollie M. Smith, Fredrikson & Byron, P.A., 200 North 3rd Street, Suite 150, Bismarck, North Dakota 58501-3879, on behalf of the Applicant, Minnkota Power Cooperative, Inc.

Gerad Paul, Senior Attorney – Assistant General Counsel, Minnkota Power Cooperative, Inc., 1822 Mill Road, PO Box 13200, Grand Forks, North Dakota 58208-3200, on behalf of the Applicant, Minnkota Power Cooperative, Inc.

Matthew Sagsveen, Assistant Attorney General, North Dakota Office of Attorney General, 600 E. Boulevard, Dept. 125, Bismarck, North Dakota 58505, on behalf of the North Dakota Public Service Commission.

Al Wahl, Administrative Law Judge and Director, Office of Administrative Hearings, 2911 North 14th Street, Suite 303, Bismarck, ND 58503, as Procedural Hearing Officer.

Preliminary Statement

On October 5, 2009, Minnkota Power Cooperative, Inc. (Minnkota), filed a Letter of Intent (LOI) to submit a combined application for a Certificate of Corridor Compatibility and Route Permit to develop a 345 kV transmission line project, referred to by Minnkota as the Center to Grand Forks 345 kV Transmission Line Project (Project). In its LOI, Minnkota requested a shortening of the prescribed one-year notice period between when the LOI is filed and when the application for a Certificate of Corridor Compatibility and Route Permit is filed.

On October 28, 2009, the Commission acknowledged the LOI, shortened the one year notice period to six months, and assessed a filing fee of \$100,000 due upon the filing of the application.

On February 5, 2010, Minnkota submitted a letter to the Commission requesting routing guidance. Specifically, Minnkota sought input regarding the potential for designation of an up to 1,000-foot-wide route in a combined Certificate of Corridor Compatibility and Route Permit application proceeding, as well as other routing issues. In a letter dated May 13, 2010, Commission Staff responded to Minnkota's request for routing guidance, indicating that the Commission believed that there should be separate Certificate of Corridor Compatibility application and Route Permit application proceedings for the Project, and that a preferable approach to proposing a 1,000-foot-wide route would be for Minnkota to propose a 1,000-foot-wide corridor in its Certificate of Corridor Compatibility application.

On July 16, 2010, Minnkota filed an application for a waiver of the corridor width requirement. In a letter filed August 19, 2010, Minnkota requested that the Commission consider its waiver application at the time it considered Minnkota's Certificate of Corridor Compatibility application. Following submission of the corridor width waiver application, Commission Staff determined that a waiver was not necessary, since Section 69-06-04-02(1)(b) of the North Dakota Administrative Code specifically provides that the Commission may designate a corridor of a different width than is set forth in said provision.

On February 18, 2011, Minnkota filed its Application for a Certificate of Corridor Compatibility, Case No. PU-09-670 (Application), requesting that the Commission designate the 1,000-foot-wide corridor identified in the Application as the corridor for the Project. On March 18, 2011, Minnkota submitted a letter regarding a slight modification of the corridor in Painted Woods Township, Burleigh County, North Dakota, as well as an updated corridor map.

On March 24, 2011, the Commission issued a Notice of Filing and Notice of Hearings setting public hearings on the Application for May 3, 4 and 13, 2011. Due to requests by landowners to move the hearings to June to avoid the spring planting season, the Commission accepted the Application as complete and issued a Notice of Rescheduled Hearings on April 20, 2011. Pursuant to the Notice, the public hearings were scheduled as follows:

- June 16, 2011, 10:00 am at the Northwood High School, 300 35th St. NE, Northwood, ND 58267;
- June 17, 2011, 10:00 am at the Chieftain Conference Center, Tepee Room, 60 4th Ave. S, Carrington, ND 58204;
- June 24, 2011, 10:00 am at Memorial Hall, 805 Main Ave., Washburn, ND 58577.

The notice identified the following issues to be considered:

1. Will the location, construction, and operation of the proposed facilities produce minimal adverse effects on the

environment and upon the welfare of the citizens of North Dakota?

2. Are the proposed facilities compatible with the environmental preservation and the efficient use of resources?
3. Will the proposed facility locations minimize adverse human and environmental impact while ensuring continuing system reliability and integrity and ensuring that energy needs are met and fulfilled in an orderly and timely fashion?
4. Is it appropriate for the Commission to approve a 1,000 foot-wide corridor as requested in the application?

On June 9, 2011, Minnkota filed a letter with maps depicting two slight corridor modifications (one in Painted Woods Township, Burleigh County, North Dakota, and the other near State Highway 3 in Wells County, North Dakota), updated Application Figures, and an updated Application Corridor Description.

Public hearings on Minnkota's Application were held as scheduled on June 16, 2011 at Northwood, North Dakota, June 17, 2011 at Carrington, North Dakota, and June 24, 2011 at Washburn, North Dakota. The June 24, 2011 public hearing at Washburn, North Dakota was continued at the end of the day in order to allow issues raised by the Commission to be addressed by Minnkota. On June 30, 2011, Minnkota submitted a late-filed exhibit, *i.e.*, the Affidavit of Terry Fasteen, dated June 29, 2011, with accompanying Exhibits 12a-1, 12c-1 and 12d-1, to address certain issues raised at the June 24, 2011 public hearing. The late-filed exhibit was received and, at the direction of the Commission, the record for the June 24, 2011 public hearing was closed on July 13, 2011.

Having allowed all interested persons an opportunity to be heard, and having heard, reviewed and considered all testimony and evidence presented, the Commission makes the following:

Findings of Fact

1. Minnkota is a wholesale electric generation and transmission cooperative headquartered in Grand Forks, North Dakota. Minnkota was incorporated under the laws of the State of Minnesota and is authorized to do business in the State of North Dakota. Minnkota provides, on a nonprofit basis, wholesale electric service to 11 retail/member-owner distribution cooperatives. The member systems' service areas encompass approximately 35,000 square miles in the eastern third of North Dakota and northwestern Minnesota that contain an aggregate population of approximately 300,000 people. These cooperatives serve more than 120,000 retail customers, including many of the region's schools, farms, homes, and businesses.

2. Minnkota proposes to construct and operate a transmission line project known as the Center to Grand Forks 345 kV Transmission Line Project. The Project consists of approximately 247 miles of new, high voltage alternating current (AC) transmission line extending from the existing Center 345 kV Substation at the Milton R. Young Unit 2 (Young 2) Generation Station located about 4.5 miles southeast of the town of Center, North Dakota, in Oliver County, to the existing Prairie Substation located on the western boundary of the city of Grand Forks, North Dakota, in Grand Forks County.

3. The Project will be constructed, owned and maintained by Minnkota. The Project will be located in Burleigh, Oliver, McLean, Sheridan, Wells, Eddy, Foster, Griggs, Steele, Nelson and Grand Forks Counties.

4. The Project is needed in order to provide Minnkota with access to the base load generation provided by the Young 2 Generation Station, and to address grid reliability issues in and around Minnkota's service territory.

5. Minnkota's proposed Project is currently undergoing a federal National Environmental Policy Act (NEPA) review process. The United States Department of Agriculture (USDA), Rural Utilities Service (RUS), as a federal agency, is required to complete an environmental review of the Project under NEPA prior to approving Minnkota's request for funding. As part of the Federal review process, the RUS must also consult with the United States Fish and Wildlife Service (USFWS) under Section 7 of the Endangered Species Act (ESA) and with the North Dakota State Historic Preservation Office (SHPO), Native American tribes and others under Section 106 of the National Historic Preservation Act (NHPA) prior to making a determination on the Project. As part of the NEPA review process, the RUS prepared an Environmental Assessment (EA) with Scoping for the proposed Project, which was issued on November 12, 2010. It is anticipated that the RUS will issue a Finding of No Significant Impact (FONSI) for the Project within the next sixty to ninety days.

6. Project development involves a four-step process, two steps within the Federal review process (preparation of an Alternative Evaluation Study and Macro-Corridor Study, and preparation of the EA) and two steps within the State review process (the Certificate of Corridor Compatibility application review process, and the Route Permit application review process).

7. Minnkota selected a 1,000-foot-wide corridor for the Project. Minnkota began its corridor selection process by analyzing preliminary study corridors for routing opportunities and constraints. Within the preliminary study corridors, Minnkota identified six- to eight-mile-wide macro-corridors, which it further refined into approximately 191 "route" segments. Utilizing the 191 "route" segments, Minnkota developed three 1,000-foot-wide "routes," which were analyzed in the EA and a preferred 1,000-foot-wide "route" was selected. The preferred 1,000-foot-wide "route" from the EA was further refined with landowner input, and was presented as the proposed corridor in the Application.

8. Public involvement opportunities were provided throughout the corridor selection process, including 18 Minnkota or RUS-sponsored public meetings attended by over 800 people, presentations by Minnkota at interagency meetings at the USFWS offices, agency scoping meetings sponsored by RUS, and correspondence and meetings with Native American tribes. Minnkota received and responded to over 300 comments regarding the proposed Project provided during public meetings or via Minnkota's website or toll-free information line. Minnkota utilized the information it obtained from the public to aid in its selection of the proposed corridor.

9. Minnkota selected the proposed corridor based on a number of factors, including: avoiding occupied residences and minimizing impacts to tillable land; avoiding irrigated cropland, rural airports and airstrips; avoiding potential disturbance to rare and endangered species of plants and animals; avoiding identified recreational, historical, archaeological, or other culturally significant areas when possible; minimizing effects on designated waterfowl production areas, game management areas and wildlife refuges; minimizing interference with extraction of economic minerals; minimizing impacts to shelterbelts, wooded areas and other areas of conservation and ecological importance; minimizing engineering, construction and maintenance hazards; coordinating planning with existing wind easements; following existing rights-of-way, survey lines, natural division lines, and agricultural field boundaries when feasible; avoiding wetlands and water bodies when possible; enhancing the electrical reliability of the transmission system; compliance with the siting criteria set forth in the North Dakota Century Code and the Commission's rules, including the Avoidance Area and Exclusion Area criteria; and public and stakeholder input.

10. During the corridor selection process, the federal, state and local departments, agencies and entities who were consulted by and provided feedback to Minnkota regarding the Project include:

- a. Federal Agencies – RUS; Federal Aviation Administration (FAA); United States Army Corps of Engineers (USACE) Omaha District, North Dakota Regulatory Office; USFWS, North Dakota Ecological Services; USDA, Natural Resources Conservation Service; United States Department of the Interior – National Park Service;
- b. State Agencies – State Historical Society of North Dakota, SHPO; North Dakota Parks and Recreation Department; North Dakota Game and Fish Department; North Dakota Department of Health; North Dakota Department of Transportation; North Dakota State Water Commission; Job Service North Dakota; North Dakota State Land Department;

- c. Local Entities – County Commissioners; Township Commissioners; Grand Forks International Airport; the University of North Dakota School of Aerospace Sciences.

11. Agency consultations and comments were included within the Application (see Section 8.11 and Appendix I), as well as in the exhibits and the testimony presented at the public hearings. Also, a USFWS representative testified at the June 24, 2011 public hearing in Washburn, North Dakota, regarding the status of the Section 7 of the ESA review that the Project is currently undergoing. Although comments and suggestions were provided by various agencies, no objections to the proposed Project were raised by any state or federal agencies or any local governmental entities.

Project Design

12. The majority of the Project will be constructed using single-pole, self-supporting, self-weathering steel, single circuit structures placed on drilled pier foundations. The typical structures will range in height from approximately 95-180 feet. The typical span between the structures will be approximately 1,000 feet. The Project will also utilize specialty structures at the Missouri River crossing (three pole steel structures) and south of the Grand Forks International Airport (two pole H-Frame wood or steel structures), which will range in height from approximately 62 feet near the Airport to up to 205 feet near the Missouri River. None of the structures will require guy wires.

13. The Project will include three sets of phase conductors. Each conductor will consist of two 959.6 kcmil (thousand circular mils) Suwannee TW (trapezoidal wire) type ACSR (aluminum conductor steel reinforced) cables, and will have an outside diameter of 1.1 inches. The Project will also have two shield wires, also known as lightning protection wires, one of which will be an optical ground wire (OPGW), while the other will be 0.5-inch Extra High Strength (EHS) steel cable.

14. Associated facilities will include upgrades or additions to the Center 345 kV Substation, the Square Butte 230 kV Substation, the Prairie 345 kV Substation, and an existing 230 kV Tie Line. A new 230 kV Tie Line between the Center 345 kV Substation and the Square Butte 230 kV Substation will also be constructed. The Project will also include four fiber optic regeneration stations, temporary laydown areas, and may include additional temporary areas for staging and concrete batch plants.

15. The majority of the Project right-of-way (ROW) will be 150-foot-wide. In some limited instances, where specialty structures are required for long spans, additional ROW may be needed.

16. The proposed Project will be designed and constructed to meet or surpass all applicable regulations, standards, and guidelines, including State codes, RUS guidelines, the National Electric Safety Code, the Institute of Electrical and Electronics Engineers standards, and Minnkota's standards. The Project will also be designed and

constructed in accordance with the practices recommended by the Avian Power Line Interaction Committee.

17. Construction of the proposed Project is expected to begin in the Fall of 2011 and is anticipated to be completed by mid-2013. The Project is anticipated to be in-service by the third quarter of 2013.

18. The total cost of the Project is estimated to be \$312 million.

19. Project benefits include: providing Minnkota and its member-owner distribution cooperatives with access to additional low-cost base load generation to serve increasing load in their service territories; improving grid reliability; generating long-term state and local tax revenue; providing construction-related jobs, including approximately 40-60 local hire opportunities; and stimulus to local economies in the form of expenditures for products and services.

Siting Criteria

20. North Dakota Administrative Code Chapter 69-06-08 sets forth certain criteria to guide the Commission in evaluating the suitability of granting an application for a Certificate of Corridor Compatibility. The criteria set forth in North Dakota Administrative Code Section 69-06-08-02 are classified as Exclusion Areas, Avoidance Areas, Selection Criteria, and Policy Criteria. Exclusion Areas and Avoidance Areas may be located within a corridor, but may not encompass more than fifty percent of the width of the corridor at any location unless there is no reasonable alternative. With respect to the Commission's Selection Criteria, a corridor for a transmission facility shall be approved only if it is demonstrated that any significant adverse effects that will result from the location, construction, and maintenance of the facility, as they relate to the Selection Criteria, will be at an acceptable minimum or managed and maintained at an acceptable minimum. In accordance with the Commission's Policy Criteria, preference may be given to an applicant who will maximize certain benefits of the transmission facility.

21. Only one Exclusion Area is located within the proposed corridor. The proposed corridor will span the Missouri River, which is designated critical habitat for the federally threatened piping plover. No construction will take place within the designated critical habitat for the piping plover, structures will be placed approximately 150 feet from the river's edge, Minnkota will not construct across the river during the piping plover's typical breeding season, and, during construction, no equipment will be placed within the Missouri River. As such, there will be no direct impacts to the designated critical habitat of the piping plover. The RUS has engaged the USFWS in a Section 7 of the ESA consultation as part of the NEPA process, and Minnkota will continue to consult with the RUS and the USFWS with respect to the logistics of the Missouri River crossing for the Project.

22. Avoidance Areas located within the proposed corridor include the following:
- a. Two Waterfowl Production Areas (WPAs) and one Wildlife Development Area (WDA). Minnkota will develop a route that avoids impacts to the WPAs and the WDA.
 - b. One Wildlife Management Area (WMA). No structures will be placed within and no lines will cross the WMA.
 - c. Eleven previously recorded archaeological resources and twelve previously recorded historic structures. Construction and operation of the Project will not impact these resources. Minnkota will conduct a Class III Cultural Resource Field Survey on high probability areas in accordance with the SHPO guidance to avoid impacting any cultural resource sites identified. The RUS and Minnkota are engaged in a Section 106 of the NHPA consultation with the SHPO, Native American tribes and others, and have developed a Programmatic Agreement (PA) to address the Class III Cultural Resources Field Survey, treatment plan and monitoring. As part of the PA, Minnkota has developed an Unanticipated Discoveries Plan that establishes procedures to follow when cultural resources are unexpectedly encountered during construction. The plan is currently being reviewed by the SHPO.
 - d. Four occupied residences and one vacant but occupiable residence. Minnkota will develop a route within the proposed corridor that maximizes setbacks from residences. If locating the route within 500 feet of an occupied residence is preferable due to other routing factors, Minnkota will seek to obtain a waiver from the landowner. If a waiver can not be obtained, Minnkota will be able to develop a viable route within the proposed corridor that satisfies the 500-foot setback requirement.
 - e. The McClusky Canal. No impacts to the canal or water availability for rural water districts is anticipated. Rural pipelines may potentially be present in the proposed corridor, but Minnkota will survey for underground utilities prior to construction in order to avoid impacts.
 - f. One central pivot irrigation system. The system will be avoided by a route within the proposed corridor.
 - g. The North Country National Scenic Trail, the Lewis and Clark National Historic Trail, and the Chain of Lakes Recreation Area/McClusky Canal. The proposed corridor will span these recreational features, visual impacts will be minimized by placing structures away from the

features to the extent practicable, and access will be maintained so that recreational activities may continue. There is no reasonable alternative to crossing these features.

23. Minnkota submitted evidence to demonstrate that any significant adverse effects resulting from the location, construction, and maintenance of the Project within the proposed corridor as they relate to the Selection Criteria set forth in Section 69-06-08-02(3) of the North Dakota Administrative Code will be at an acceptable minimum or managed and maintained at an acceptable minimum.

24. Minnkota submitted evidence to demonstrate its commitment to maximize the benefits of the proposed Project to the extent possible with respect to the Policy Criteria set forth in Section 69-06-08-02(4) of the North Dakota Administrative Code.

Other Issues

25. Minnkota completed an Electric and Magnetic Field (EMF) Effect Estimates Report. Minnkota submitted evidence that the calculated EMF levels for the Project are at or lower than those for typical 345 kV transmission lines, and that the calculated EMF levels at the edge of the right-of-way fall well below any known guidelines or recommendations. Minnkota also presented expert testimony that electric field (EF) exposure is not a health risk, magnetic field (MF) exposure remains an implausible, low-priority source of human health risk, and power-line EMF exposures are not harmful to animals or livestock or their reproductive health.

26. Minnkota presented expert testimony and evidence that transmission lines are unlikely to interfere with the use of the Global Positioning System (GPS) and that any potential interference by transmission line structures, if it occurred at all, would be temporary.

From the foregoing Findings of Fact, the Commission now makes its:

Conclusions of Law

1. The Commission has jurisdiction over this proceeding under Chapter 49-22 of the North Dakota Century Code.
2. The Project proposed by Minnkota is a transmission facility as defined in Section 49-22-03(12) of the North Dakota Century Code.
3. The Application submitted by Minnkota meets the corridor compatibility evaluation criteria required by Chapter 49-22 of the North Dakota Century Code and Section 69-06-08-02 of the North Dakota Administrative Code.

4. With respect to the proposed corridor, the location, construction, and operation of the proposed transmission facility will produce minimal adverse effects on the environment and upon the welfare of the citizens of North Dakota.
5. With respect to the proposed corridor, the proposed transmission facility is compatible with the environmental preservation and the efficient use of resources.
6. With respect to the proposed corridor, the proposed transmission facility location will minimize adverse human and environmental impact while ensuring continuing system reliability and integrity and ensuring that energy needs are met and fulfilled in an orderly and timely fashion.
7. It is appropriate for the Commission to approve the proposed 1,000 foot-wide corridor.
8. The Commission has jurisdiction to ensure compliance with National Electric Safety Code standards in the construction and operation of the proposed transmission facility.

From the foregoing Findings of Fact and Conclusions of Law, the Commission now issues its:

Order

The Commission orders that:

1. Certificate of Corridor Compatibility No. _____ for a Transmission Facility is issued to Minnkota Power Cooperative, Inc., for the construction, operation and maintenance of a 345 kV transmission facility known as the Center to Grand Forks 345 kV Transmission Line Project.
2. The 1,000-foot-wide corridor, as described in the Application, as supplemented on June 9, 2011, is designated as the corridor for the Project.
3. Within the corridor, Minnkota may select and seek approval of a route for the Project.
4. The authorizations granted by the Certificate of Corridor Compatibility for the Project are subject to modification by order of the Commission if deemed necessary to protect further the public or the environment.

PUBLIC SERVICE COMMISSION

**Kevin Cramer
Commissioner**

**Tony Clark
Chairman**

**Brian P. Kalk
Commissioner**