

**STATE OF NORTH DAKOTA
PUBLIC SERVICE COMMISSION**

**Basin Electric Power Cooperative
North Killdeer Loop Phase I - McKenzie County
Siting Application**

Case No. PU-14-813

FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER

March 17, 2015

Appearances

Commissioners Julie Fedorchak, Brian P. Kalk, and Randy Christmann

Casey J. Jacobson, Senior Staff Counsel, and Anine Lambert, Attorney, Basin Electric Power Cooperative, 1717 East Interstate Avenue, Bismarck, North Dakota 58503, on behalf of Basin Electric Power Cooperative.

Mitchell D. Armstrong, Assistant Attorney General, as Counsel for the North Dakota Public Service Commission, State Capitol, 600 East Boulevard Avenue, Bismarck, North Dakota 58505, on behalf of the Public Service Commission.

Wade C. Mann, Administrative Law Judge, Office of Administrative Hearings, 2911 North 14th Street, Suite 303, Bismarck, North Dakota 58501-1882, as Procedural Hearing Officer.

Preliminary Statement

On November 12, 2014, Basin Electric Power Cooperative (Basin Electric) filed with the North Dakota Public Service Commission (Commission) a consolidated application for a Certificate of Corridor Compatibility and Route Permit to construct twenty-eight miles of 345kV electric transmission line and associated facilities in McKenzie County.

On January 21, 2015, the Commission deemed the application complete and issued a Notice of Filing and Notice of Hearing, scheduling a public hearing on Basin Electric's Application to begin March 17, 2015 at 9:00 a.m. CDT at Teddy's Residential Suites, 113 9th Avenue SE, Watford City, ND 58854. The Notice of Hearing identified the following issues to be considered in the application for waiver of procedures and time schedules:

1. Are the proposed facilities of such length, design, location, or purpose that they will produce minimal adverse effects and that adherence to applicable procedures and time schedules may be waived?
2. Is it appropriate for the Commission to waive any procedures and time schedules as requested in the application?

The Notice of Hearing also identified the following issues to be considered in the application for certificate of corridor compatibility and route permit:

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. Is the proposed facility compatible with the environmental preservation and the efficient use of resources?
3. Will the proposed facility location 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?

On March 6, 2015, Basin Electric filed a series of maps detailing the proposed final transmission line structure placement.

On March 17, 2015, at 9:00 a.m. CDT, a public hearing was held as scheduled. Basin Electric presented four witnesses and two members of the public testified.

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 conclusions:

Findings of Fact

1. Basin Electric is a regional wholesale electric generation and transmission cooperative, organized under the laws of the state of North Dakota, and headquartered in Bismarck, North Dakota. Basin Electric provides power to 138 member distribution

systems serving more than 2.8 million consumers in nine states, including North Dakota.

2. Basin Electric proposes to construct, operate, and maintain approximately 28 miles of new 345kV alternating current electrical transmission line connecting the proposed Patent Gate 345/115 kV Substation and the proposed Kummer Ridge 345/115 kV Substation. Basin Electric describes the new transmission line as Phase I of the North Killdeer Loop Project (Project). The transmission line and proposed substations will be located in McKenzie County. Later in 2015, Basin Electric will submit a siting application for Phase II of the North Killdeer Loop Project. Phase II of the North Killdeer Loop Project would interconnect the Kummer Ridge Substation and a third substation, Roundup 345/115 kV Substation, near Killdeer, ND. The Roundup Substation is part of Basin Electric's AVS-Neset 345kV Project (PU-11-696). Phase II of the North Killdeer Loop Project would also interconnect with the AVS-Neset Project.

3. The 28.1 mile, 345 kV electric transmission line would be single circuited for approximately 27 miles and double circuited for approximately 1 mile. The transmission lines would be constructed using single-pole structures within a 150-foot-wide Right of Way (ROW).

4. Basin Electric has identified need for the Project because of demand for additional electric transmission capacity in the Williston Basin and surrounding area; and to meet reliability and system stability requirements for the region. Basin Electric forecasted in 2011 a need for an additional 538 MW of electric generation by 2016 and used this forecast to develop the original AVS-Neset Project, approved by the Commission in April, 2014. The 2013 load forecast showed an increased need of nearly 50% by the 2016-2017 winter season. Basin Electric concluded that in order to meet the system delivery requirements, the Project would be needed in McKenzie County to connect with the transmission system in the area. Basin Electric states that if the Project does not get built as proposed, the existing transmission capacity will curtail future load growth.

5. Project benefits include: providing Basin Electric 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, and stimulus to local economies in the form of expenditures for products and services.

6. The total cost of the Project is estimated to be \$135 million.

Alternatives

7. Basin Electric's Application and testimony described consideration of several alternatives, as well as the process of evaluating alternatives in conjunction with the National Environmental Policy Act (NEPA) process. A no-action alternative was also considered. These alternatives did not adequately address the necessary load growth or provide a long-term solution to address the load growth driving this project.

8. The United States Department of Agriculture's Rural Utility Service (RUS) issued a Draft Environmental Impact Statement (DEIS) in December 2012 and a Supplemental Draft Environmental Impact Statement (SDEIS) in December 2013 for the Project in cooperation with Western Area Power Administration (Western) and the United States Forest Service (USFS). The DEIS and SDEIS evaluated 1,000-foot corridor routes and addressed the impacts associated with 150-foot-wide Project alignment and ROW within the 1,000-foot corridor related to construction, operation, and maintenance of the proposed Project. The DEIS also included a detailed evaluation and comparison of route alternatives and a no action alternative. The Final EIS was issued in May 2014. The USFS and RUS issued their individual RODs in September 2014. Western's Record of Decision (ROD) was issued in November 2014.

9. Basin Electric selected the proposed route based on a number of factors including: input from landowners and federal and state agencies; minimizing environmental impacts through measures such as avoidance of wetlands; cultural sites and environmentally sensitive areas; compliance with Chapter 49-22 of the North Dakota Century Code and the Commissions siting rules; and feasibility from a design, construction and access perspective.

Project Design

10. The proposed transmission line and associated facilities will be designed and constructed to meet or surpass all relevant codes and standards of the Rural Utilities Service, the National Electric Safety Code, the Institute of Electrical and Electronics Engineers, the American Society of Civil Engineers, the American Institute of Steel Construction, the American Concrete Institute and Basin Electric standards.

11. The Project will be constructed on self-supporting galvanized steel single-pole structures. The typical structure will be around 115 feet tall. The top of the pole will be about 15 inches in diameter and the bottom will be about 50 inches in diameter. The angle structures will also be single poles and will have concrete foundations and no guy wires. The regular in-line structures will be on concrete foundations or directly buried in the ground.

12. The associated facilities would include two new substations. The Kummer Ridge 345/115 kV Substation would encompass approximately 11 acres within a 41 acre parcel east of Watford City. The Patent Gate 345/115 kV substation would be located on a 17 acre parcel within a 117 acre parcel located northeast of Alexander. Both sites are located on land already owned by Basin Electric. A 345kV/115 kV transformer would be installed at Kummer Ridge. Two 345/115 kV transformers would be installed at Patent Gate. Bus, disconnect switches, circuit breakers, grounding switches and protection and control equipment to support the 345 kV interconnection would also be installed at both sites.

13. The Project will be constructed with an Aluminum Steel Reinforced Conductor, 1.8 inches in diameter with 76 strands of aluminum and 19 strands of steel. Above the conductor will be an optical ground wire and a steel ground wire both of which are approximately 1/2 inch in diameter. The transmission line will require approximately five to six structures per mile, depending on terrain and other design factors. The right-of-way will be 150 feet wide.

14. Construction of the Project is expected to begin in the spring of 2015 and is anticipated to be complete by the end of 2016.

Siting Criteria -- Corridor & Route

15. 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 and a Route Permit for a transmission facility. The criteria as set forth in Section 69-06-08-02 are classified as Exclusion Areas, Avoidance Areas, Selection Criteria and Policy Criteria. North Dakota Administrative Code, Chapter 69-06-08 provides that Exclusion and Avoidance Areas may be located within a corridor, but at no given point shall such an area encompass more than 50% of the corridor width, unless there is no reasonable alternative. North Dakota Administrative Code, Section 69-06-08-02 provides that a transmission facility route must not be sited

within an Exclusion Area. A transmission facility route must not be sited within an Avoidance Area unless the Applicant shows under the circumstances there are no reasonable alternatives.

16. In accordance with the Commission's Selection Criteria, a corridor or route may be approved if it is demonstrated that any significant adverse impacts that will result from the location, construction and maintenance of the transmission facility will be of an acceptable minimum or managed at an acceptable minimum. In accordance with the Commission's Policy Criteria, preference may be given to an applicant demonstrating certain benefits from the adoption of certain policies and practices.

17. Basin Electric submitted information in its Application and testimony at the hearings, concerning compliance with the Commission Exclusion and Avoidance Area criteria as applied to the proposed Corridor and Route.

18. Basin Electric evaluated a 150 foot corridor.

19. The Route and Corridor do not include any Exclusion Areas.

20. Avoidance Areas impacted by the Route and Corridor include areas which are geologically unstable. Approximately half an acre of terrain exists near an intermittent tributary of Northfork Creek where landslides have occurred in the past. There are no reasonable alternatives, other than the proposed route concerning the geologically unstable areas as the identified landslide areas would be spanned by the transmission line, with no structures placed in the susceptible areas. Further, geotechnical assessments will be conducted at structure locations to minimize the potential development of landslides in susceptible areas. The Corridor and/or Route do not cross terrain with greater than ten percent slope.

21. Neither the Corridor nor Route would be located within 500 feet of any residence.

22. The Project will have minimal adverse effects on avian species. Surveys for raptor and migratory birds will be done prior to construction of the Project with consultation from the United States Fish and Wildlife Services, Western Area Power Administration, and the North Dakota Game and Fish Department. To help avoid potential impacts to avian species along the proposed route during operation of the transmission line, bird flight diverters will be installed as determined in consultation with Western and the United States Fish and Wildlife Service.

23. A Class I and Class III cultural resource survey (pedestrian survey) were conducted along the proposed route. The survey area consisted of a 150 ft. wide corridor centered on the proposed route centerline. Numerous prehistoric and historic sites were identified during the Class III Surveys. Significant cultural resources were avoided during the routing of the proposed transmission line. Structure locations were adjusted to limit adverse effects on the cultural resource. Additionally, it is unlikely that the paleontological resources would be affected by the Project. The North Dakota Historical Preservation Office concurred that no significant sites or historic properties would be affected by the construction.

24. Basin Electric submitted substantial information in its Application and through testimony that any significant adverse effects from the location, construction and maintenance of the transmission facility as they relate to the Selection Criteria listed in Section 69-06-08-1(3) of the North Dakota Administrative Code, will be at an acceptable minimum or will be managed and maintained at an acceptable minimum.

25. Basin Electric submitted substantial information in its Application and through its testimony to demonstrate its commitment to maximize the benefits of the proposed transmission facility to meet the Policy Criteria set forth in Section 69-06-08-1(4) of the North Dakota Administrative Code.

Other Issues

26. Basin Electric states it has filed a Conditional Use Permit application with McKenzie County. Basin Electric will comply with all local land use and planning ordinances.

27. A National Wetlands Inventory was conducted along the proposed route. No permanent impacts to the wetlands are anticipated as a result of project construction. Basin Electric will implement mitigation measures to minimize indirect impacts to surface water and wetland resources, such as erosion and sedimentation control Best Management Practices. Basin Electric will require its contractor to secure required storm water construction permits for the project from the North Dakota Department of Health.

28. During the route selection process, federal, state, and local departments, agencies and entities who were contacted by and provided feedback to Basin Electric regarding the Project include:

- a. Federal Agencies: Rural Utilities Service; Western Area Power Administration; United States Army Corps of Engineers; United States Fish and Wildlife Service; Natural Resources Conservation Service; United States Department of Agriculture, Farm Services Agency, North Dakota State Office; Federal Aviation Administration; United States Department of the Interior - National Park Service; Environmental Protection Agency; Federal Highway Administration.
- b. North Dakota State Agencies: Department of Transportation; Parks and Recreation Department; State Land Department; Public Service Commission; State Historic Preservation Office; Game and Fish Department; Department of Health.
- c. McKenzie County: Conditional Use Permit; County Road Encroachments; County Floodplain Encroachments.
- d. Tribal Representatives.

29. Agency consultations and comments were included in the Application. See Sections 8.11 and 5.0 for specific scoping agency comments and concerns, as well as coordination efforts. Standard Mitigation and Conservation Measures and Best Management Practices are included as Appendix G of the Application.

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 Basin Electric is a transmission facility as defined in Section 49-22-03(12) of the North Dakota Century Code.
3. The location, construction and operation of the proposed Project will produce only minimal adverse effects of the environment and upon the welfare of the citizens of North Dakota.
4. The application submitted by Basin Electric meets the Corridor and Route evaluation criteria required by Chapter 49-22 of the North Dakota Century Code.

5. The proposed transmission facility Corridor and Route 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.
6. The proposed Project is compatible with the environmental preservation and the efficient use of resources.
7. The requested waivers of procedures is justified, based upon: the minimal impacts on the environment and the welfare of the citizens of North Dakota; the lack of objection to the proposed transmission facility by federal, state and local government bodies and agencies or by landowners along the route' and the objective to have a reliable integrated transmission system in North Dakota.
8. The proposed transmission facility is of such length, design, location and purpose that it will produce minimal adverse effects.
9. It is appropriate for the Commission to approve a Corridor less than one mile.

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

Order

The Commission Orders:

1. Basin Electric's request for a waiver of procedures and time schedules is granted.
2. Certificate of Corridor Compatibility and Route Permit for Transmission Facility Corridor No. ___ is issued to Basin Electric, designating a Corridor and Route for its proposed transmission facility as described in Basin Electric's Application and supplemental Findings and granting Basin Electric authority to construct, operate and maintain the North Killdeer Loop Phase I Project.
4. Route Permit No. _____ is issued to Basin Electric granting authority to construct, operate and maintain its Project.

5. Basin Electric shall conduct a pre-construction conference prior to commencement of any construction, which must include a Basin Electric representative, its construction supervisor and a representative of Commission staff to ensure that Basin Electric fully understands the conditions set forth in this Order.
5. Basin Electric shall complete cultural resource surveys on all remaining parcels and shall file with the Commission documentation showing SHPO concurrence with the findings set forth in the associated reports prior to beginning construction on the un-surveyed parcels.
6. Basin Electric will comply with the rules and regulations of all other agencies having jurisdiction over any phase of the proposed transmission facility. Prior to commencing construction of any phase of the Project, Basin Electric shall obtain all other necessary approvals and permits for construction of such phase and provide copies to the Commission prior to the construction of each phase.
7. Basin Electric shall inform the Commission of its intent to start construction on the transmission facility prior to the commencement of construction, and, once construction has started, Basin Electric shall keep the Commission updated of construction activities on a weekly basis.
8. Basin Electric shall construct and operate the Project in the manner described in its Application and at the hearing, and in accordance with all applicable safety requirements.
9. If any cultural resource, paleontological, archeological, historical, or grave site is discovered during construction, earth disturbing activities in the immediate vicinity of the discovery must be halted. The resource must be marked, preserved and protected from further disturbances until a professional examination can be made and consultation with the State Historical Preservation Office. A report of such examination must be filed with the Commission, and clearance to proceed must be given by the Commission.
10. Construction must be suspended when weather conditions are such that construction activities will cause irreparable damage, unless adequate protection measures approved by the Commission are taken.
11. Reclamation along the right-of-way shall be continuous and coordinated with construction activities.

12. Reclamation, fertilization and reseeding is to be done by Basin Electric or its contractor according to the Natural Resource Conservation Service or USFS recommendations for CRP, native prairie and other non-cropped lands unless otherwise specified by the landowner and approved by the Commission.
13. Basin Electric's obligation for reclamation and maintenance of the right-of-way shall continue throughout the life of the transmission facilities.
14. Basin Electric shall work with landowners and residents to mitigate any increase in television and residential radio interference that results from the path of the transmission line.
15. Basin Electric shall repair or replace all fences and gates removed or damaged during all phases of construction and operation of the proposed transmission facilities.
16. Basin Electric shall obtain approval from the Commission or Commission staff prior to any changes in structure locations.
17. Basin Electric shall provide the Commission with a copy of the facility alignment plan and profile drawings showing the facility as built (hard copy and electronic versions), and an electronic version of the as-built facility that can be imported into ESRI GIS mapping software, within three months of the completion of construction of the Project.
18. The March 9, 2015, Certification Relating to Order Provisions - Transmission Facility Siting (Certification), with accompanying Tree and Shrub Mitigation Specifications, is incorporated by reference. Basin Electric will comply with this order.
19. To the extent there are any conflicts or inconsistencies between Basin Electric's Applications and the March 9, 2015, Certification, the Certification provisions control.
20. The authorizations granted by the Corridor Certificate and Route Permit are subject to modification by order of the Commission if deemed necessary to further protect the public or the environment.

PUBLIC SERVICE COMMISSION

Julie Fedorchak
Chairman

Brian Kalk
Commissioner

Randy Christmann
Commissioner