# STATE OF NORTH DAKOTA
# PUBLIC SERVICE COMMISSION

**Basin Electric Power Cooperative** **Case No. PU-11-696**
**AVS – Neset 345 kV Transmission Line**
**Siting Application**

## FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER

**April 23, 2014**

### Appearances

Commissioners Brian P. Kalk, Randy Christmann, Julie Fedorchak

Casey J. Jacobson, Attorney, Basin Electric Power Cooperative, 1717 East Interstate Avenue, Bismarck, North Dakota 58503, on behalf of Basin Electric Power Cooperative.

Mitchell D. Armstrong, Special Assistant Attorney General on behalf of the Public Service Commission.

Bonny M. Fetch, Administrative Law Judge, Office of Administrative Hearings, 1707 North 9th Street, Bismarck, North Dakota 58503, as Procedural Hearing Officer.

### Preliminary Statement

On December 6, 2011, Basin Electric submitted a Letter of Intent to the Public Service Commission notifying the Commission of its intent to construct approximately 200 miles of 345 kV Transmission Line originating from the Antelope Valley Station and terminating at the Neset 230 kV Substation located near Tioga, North Dakota.

By a Motion dated December 21, 2011, the Commission acknowledged the Letter of Intent and assessed a filing fee of $100,000.00.

On March 15, 2013, Basin Electric submitted its combined Applications for a Waiver of Procedures and Time Schedules, Certificate of Corridor Compatibility, and a Route Permit for the AVS to Neset 345 kV Transmission Project (Application).

On July 2, 2013, Basin Electric filed an Amendment to the Applications.

On July 30, 2013, the Commission issued a Notice of Filing and Notice of Hearings on Basin Electric's Application and found the Applications to be complete conditioned on Basin Electric filing a map detailing the proposed final transmission line

structure locations one week prior to the hearing. 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?

The Notice of Hearings identified the following additional issues to be considered in Basin Electric's 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?

On August 22, 2013, Basin Electric filed a map detailing the proposed final transmission line structure locations.

On September 4, 2013 at 10:30 a.m. CST, a public hearing was held as scheduled in Killdeer, North Dakota. Basin Electric presented seven witnesses and members of the public offered comments.

On September 5, 2013 at 10:00 a.m. CST, a public hearing was held as scheduled in Tioga, North Dakota. Basin Electric presented five witnesses and members of the public offered comments.

On September 11, 2013, late filed Exhibits 33 and 34 were filed by Valerie Naylor.

On September 12, 2013 at 10:00 a.m. CST, a public hearing was held as scheduled in Williston, North Dakota. Basin Electric presented five witnesses and members of the public offered comments.

On September 27, 2013, Basin Electric filed the following late filed exhibits:

Exhibit 31 – Agencies and Permit Status Update;
Exhibit 39 – Wisconsin PSC Underground Study; and
Exhibit 40 – Exclusions & Avoidance Areas for the six mile macro corridor near Killdeer, North Dakota.

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 more than 137 member systems serving more than 2.8 million consumers in nine states, including North Dakota.

2. Basin Electric proposes to construct and operate a 345 kV transmission line known as the AVS to Neset 345 kV Transmission Project. The Project consists of approximately 197 miles of new, high voltage 345 kV and 230 kV alternating current transmission line and associated facilities extending from Basin Electric's existing Antelope Valley Station (AVS) and terminating at the Neset 230 kV Substation located near Tioga.

3. The AVS to Neset 345 kV Transmission Project will be constructed, owned and maintained by Basin Electric with the exception of a 31-mile 115 kV/345 kV double circuit segment between the proposed Judson and Tande Substations. The 115 kV circuit will be owned by Basin Electric Electric's member, Mountrail-Williams Electric Cooperative, but maintained by Basin Electric. The transmission line will be located in Mercer, Dunn, Williams, McKenzie, and Mountrail Counties.

4. The Project is needed to provide Basin Electric members access to baseload generation to serve increasing load in their service areas and to address grid reliability issues in northwestern North Dakota and eastern Montana caused largely by development within the Bakken oil field. Basin Electric reports 55% load growth experienced in this area since 2011 and forecasts continued growth of 6% annually. Analysis indicates that by 2016 the load will have increased beyond the load-serving capacity of the existing system. Basin Electric states that if the Project does not get built as proposed, the existing transmission capacity will curtail future load growth.

5. In addition, several representatives from local electric cooperatives testified regarding the issues they have faced and are anticipating to face as a result of the increasing load growth. For instance, a representative from McKenzie Electric Cooperative testified its load grew 300% since 2005, and 69% alone in 2012. In addition to the load needed to provide electricity to oil wells, he testified numerous

additional load sources occur monthly, including pipeline loads, man camps, and residential developments. He stated the cooperative had been notified by the Western Area Power Administration (WAPA) in the winter of 2012/2013 that the cooperative could be load limited in its delivery to the Watford City area. This does not only include McKenzie Electric's load, but also Montana-Dakota Utility's load serving Watford City. In such a circumstance, if the load is not able to be reduced to the level specified within thirty minutes, WAPA begins opening up breakers, indiscriminately shutting off service to customers. He testified McKenzie Electric's reliability is currently not adequate, yet the load continues to grow and the access to installed generation through transmission infrastructure is the most reliable, low cost approach to address the need in a timely manner.

6. The total cost of the Project is estimated to be $375 million.

## Alternatives

7. Basin's Application and testimony described consideration of several alternatives, as well as the ongoing process of evaluating alternatives in conjunction with the National Environmental Policy Act (NEPA) process. The evidence reflects several alternatives were considered, including not constructing this project but upgrading existing infrastructure and constructing several new 115-kV lines. These alternatives did not adequately address the necessary load growth or provide a long-term solution to address the load growth driving this project. Other alternatives considered included crossing Lake Sakakawea further to the east or routing around Lake Sakakawea to the east. However, these alternatives resulted in constructability concerns, increased length of the line resulting in additional impacts and costs, and failure to provide the load to the areas in need. Additional alternatives considered included adding another circuit to double circuit or parallel the Killdeer Loop (described below) and eliminate the proposed western segment along the U.S. Highway 85 corridor. There are reliability concerns with this approach because placing two major transmission lines in the same corridor increases system exposure to weather or other events that might disable both lines. In addition, the proposed project provides transmission service to areas south of Watford City, which would not be served by this alternative.

8. A Draft Environmental Impact Statement (DEIS) was prepared for the U.S. Department of Agriculture, Rural utilities Service's (RUS) in cooperation with the Western Area Power Administration (Western) and the U.S. Department of Agriculture, Forest Service (Forest Service). In addition to a no-action alternative, the DEIS evaluated an Alternative B sometimes referred to as the "Killdeer loop", consisting of a more easterly route. A primary difference between the alternatives was that the preferred alternative A was approximately 15 miles shorter. During the hearing, Basin explained that revised load forecasts had made it necessary to construct both of the alternatives A and B and a supplemental DEIS was being prepared with the preferred alternative being the proposed Alternative A corridor and route plus the previous

Alternative B "Killdeer Loop" 345 kV segment for which Basin Electric intends to seek a separate route permit for in the future.

9. In its evaluation of alternatives, Basin evaluated a network of 46 individual 1,000 foot route corridors within six-mile wide macro-routes. Basin selected the proposed route based on considerations of meeting the project's purpose and need, consistency with planned and anticipated system needs, design and reliability standards, avoiding and minimizing impacts to environmental and sensitive resource, reasonability, engineering guidelines, and what was technically feasible and economically viable.

10. Basin testified it was in the process of preparing a supplemental draft EIS with additional alternatives in conjunction with the NEPA process as a result of the revised load forecasts.

11. Basin Electric states it 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.

12. Basin Electric submitted information through testimony and a late filed Exhibit that placing the Project or portions of the Project underground is neither feasible nor reasonable. Building transmission lines underground creates significantly more environmental disturbance than overhead construction and significantly adds to overall project costs. Additionally, maintenance and repair work with underground transmission lines would take a significantly longer amount of time and expense. As a result, undergrounding of 345 kV transmission is generally reserved for urban areas where overhead construction is not feasible. The Commission finds undergrounding is not technically suitable in the environmentally sensitive areas of western North Dakota.

13. The Commission finds the proposed overhead routing through the U S Highway 85 corridor is the preferred alternative.

## Project Design

14. 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, Basin Electric standards, and in accordance with Avian Power Line Interaction Committee suggested practices for raptor-safe transmission line design.

15. 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 directly buried in the ground. Some special situations will require H-frame structures or structures requiring two poles.

16. The Project will be 3-phase, meaning it uses three current carrying conductors. The 345 kV conductor will be 1.8 inches in diameter with 76 strands of aluminum and 19 strands of steel. Above the conductors will be an optical ground wire and a steel ground wire both of which are approximately ½ inch in diameter. The line will require approximately six to seven structures per mile, depending on terrain and other design factors. The right-of-way will be 125 feet wide for the 230 kV segments and 150 feet wide for the 345 kV segments.

17. Associated facilities will include upgrades or additions to the AVS Substation, Charlie Creek Substation, Neset Substation and new construction of the Judson and Tande Substations.

18. Construction of the proposed Project from AVS to Judson is expected to begin in the spring of 2014 and is anticipated to be complete by the end of 2015. Construction of the segment from Judson to Tande is expected to be completed no later than the fourth quarter of 2017.

Siting Criteria – Corridor & Route

19. 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.

20. 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.

21. Basin Electric evaluated a Corridor of 150 feet wide for the 345 kV segments of the transmission line and 125 feet wide for the two 230 kV segments, which extend approximately 2 miles from the Judson to Williston substations and approximately 1 mile from the Tande to Neset substations.

22. The proposed Route and Corridor do not include any Exclusion Areas.

23. Avoidance Areas crossed by the Route and Corridor include:
   a. Little Missouri Grasslands Management Area;
   b. Lewis & Clark Wildlife Management Area;
   c. Areas that are geologically unstable;
   d. Areas that have recreational significance;
   e. The route is located within 500 feet of four rural residences; and
   f. The route is located within 500 feet of two businesses.

23. There are no reasonable alternatives other than the proposed route concerning the two businesses located within 500 feet of the project. The businesses are located just north of the U.S. Highway 85, just west of Williston near the Judson Substation. It would be near impossible to route the project into the Judson Substation without being within 500 feet from a place of business due to the growth of commercial development in this area.

24. There are no reasonable route alternatives other than the proposed route and corridor crossing the Little Missouri Grasslands Management Avoidance Area. To achieve the Project's intent to supply additional load capacity and enhance reliability to the region, the Project is required to interconnect to Basin Electric's existing Charlie Creek Substation located southeast of Grassy Butte, North Dakota. The lands immediately surrounding the Charlie Creek Substation are National Grasslands and, thus, an Avoidance Area. The routing alternatives through this region are extremely difficult due to the physical landforms such as the rugged badlands area to the west and also the Killdeer Mountains to the east, which present extreme access issues due to their rough terrain and also additional recreational and aesthetic considerations. The Route and Corridor in this area follows other existing electrical and liquid transmission lines along U.S. Highway 85. Further, a placement of linear projects on United States Forest Service (Forest Service) Lands requires the Forest Service to evaluate the impacts of the project and to ascertain compatibility with the Forest Service Management Plan for those areas crossed. Through the development of the EIS, Basin Electric has coordinated the placement of the Route/Corridor with the Forest Service. The proposed route and corridor avoid the Forest Service lands that are designated "Roadless Areas" where the placement of a transmission project would be incompatible with those land management unit's plans. Both the Lone Butte and Long X Divide land management units have been designated as Roadless Areas by the Forest Service. The Forest Service will grant a Special Use Permit to Basin Electric for use of these

lands only if it determines that the placement of the transmission project is compatible with the land management units it administers.

25. There are no reasonable alternatives other than the proposed corridor and route crossing the Lewis & Clark Wildlife Management Avoidance Area which is located just south of the Missouri River in McKenzie County near U.S. Hwy 85. Similarly, there are no reasonable alternatives to crossing the recreational-significant Lewis and Clark National Historic Trail at the Missouri River. Early coordination efforts with the United States Army Corps of Engineers (USACE) and the North Dakota Game and Fish identified a utility corridor that the agencies preferred. In order to cross either Lake Sakakawea or the Missouri River upstream of the reservoir the opportunities to locate outside of the Lewis and Clark Wildlife Management Area are limited. To the east, Lake Sakakawea presents a constructability constraint. The City of Williston and the recreational aspects to that river segment preclude routing to the east of U.S. Highway 85. To the west of the Lewis and Clark Wildlife Management Area is the community of Trenton, Fort Buford, a National Historic Site and irrigated lands all of which are Avoidance or Exclusion Areas. Both the North Dakota Game and Fish and the USACE encouraged placement of the route within the existing utility corridor located alongside U.S. Highway 85 that already contains an existing 230 kV transmission line and several pipelines. The proposed route reflects the desired location by both agencies.

26. There are no reasonable route alternatives other than the proposed corridor and route crossing certain School Trust Lands, which may be of recreational significance. Most of these lands are leased for grazing, but are open to the public for walk-in recreational uses such as hunting, fishing, hiking and bird watching. School Trust Lands are managed by the North Dakota State Land Department and Basin Electric must obtain easements from the department before routing across these lands.

27. There are no reasonable route alternatives other than the proposed corridor and route crossing geologically unstable Avoidance Areas, which are generally located near the Missouri and Little Missouri Rivers and in the Badlands. The Project crossing these lands is inevitable due to the length of the Little Missouri River and the Badlands areas within the overall Project Area. The majority of the geologically unstable areas will be spanned by the route. Further, geotechnical assessments will be conducted at the structure locations to minimize potential development of landslides during construction.

28. The route is located within 500 feet of four rural residences. Waivers have been obtained from the homeowners in each of the four occurrences.

29. The Project will have minimal adverse effects on eagles and other avian species. Basin Electric will construct the Project in accordance with the Avian Power Line Interaction Committee's Guidelines and its own Avian and Bat Protection Plan. Further surveys for raptor and migratory birds will be done prior to construction of the Project with consultation from the Unites States Fish and Wildlife Services, Western

Area Power Administration, United States Forest Service and the North Dakota Game and Fish Department.

30. To help avoid potential impacts to avian species along the proposed route during operation of the transmission line, bird flight diverters will be installed in high risk areas determined in consultation with the Western Area Power Administration biologist and consultation with the United States Fish and Wildlife Service.

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

32. Basin Electric submitted 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), North Dakota Administrative Code.

33. A Class I file search and Class III cultural resource survey (pedestrian survey) were conducted along the proposed route in accessible areas. The survey area consisted of a 150 ft. wide corridor centered on the proposed 345 kV route centerline and a 125 ft wide corridor centered on the proposed 230 kV segments. Numerous prehistoric and historic sites were identified during the Class III Surveys. Structure locations were adjusted to limit adverse effects on cultural resources. Additionally, it is unlikely that paleontological resources would be affected by the Project. Construction in any area will not begin until the North Dakota State Historical Preservation Office has concurred that no significant sites or historic properties are affected by the construction.

34. In July 2013, the National Park Service, American Battlefield Protection Program awarded two grants to the Center for Heritage Renewal at North Dakota State University to, among other things, study a 36 square-mile area of private land (Study Area) near the existing one acre Killdeer Mountain Battlefield historic site to determine its eligibility for potential inclusion in the National Registry of Historic Places. The Route/Corridor traverses approximately eight miles through the Study Area. Within the Study Area are existing ranches, residences, distribution lines, oil pipelines and numerous oil wells, and associated structures. Presently, the Study Area has not been determined eligible for the National Register of Historic Places. The Route/Corridor is located approximately ¾ of a mile from the existing historic site. The Project will not preclude designation of the Study Area on the National Register of Historic Places. On February 3, 2013, Basin Electric provided the State Historical Society an interim report of the results of the Class III Surveys. Cultural surveys have been done on all of the lands in the Study Area except for ½ mile due to the landowner not granting survey permission. No cultural sites were identified during the surveys that would be impacted by the Project. On September 3, 2013, the State Historical Society filed comments addressing this issue

and Basin Electric committed to following the State Historical Society's recommendations:

a. Move the proposed Gumbo Creek Substation outside of the Killdeer Mountain Battlefield Core Area;
b. Conduct a visual study from the perspective of the existing Killdeer Mountain Battlefield site and Medicine Hole;
c. Conduct additional archaeological investigations at proposed structure locations;
d. Conduct magnetomic surveys through the eight mile length of the Killdeer Mountain Battlefield Study Area.

35. Basin Electric has removed the Gumbo Creek Substation from the Killdeer Mountain Battlefield Core Area and has commenced work on the remaining items. Further, Basin Electric has selected single pole structures which reduce the visual impact of the Project. Also, Basin Electric testified that it has obtained voluntary easements for the majority of the proposed route through this area.

Other Issues

36. The proposed corridor and route passes near five existing public airports. They are the Weydahl Field near Killdeer, the City of Williston's Slouin Airfield, Tioga Municipal Airport, Beulah Airport, and the Watford City Municipal Airport. Screening analysis indicated that an FAA obstruction analysis was required for structures that will be located near the Killdeer and Williston Airports. In December 2012 the FAA issued a Determination of No Hazard to Air Navigation for Weydahl Field. The City of Williston is currently considering four airport relocation alternatives, of which one alternative is remaining at the existing Slouin Airport site. The three other airport relocation alternatives are located northwest of the City of Williston and encompass a large geographical area. To totally avoid the planning area for the airport relocation, Basin Electric would have to increase the route by approximately 20 additional miles. Through communication with Airport Project Staff, Basin Electric elected to propose the route across what it believes to be the least likely relocation alternative. Basin Electric is working through city and project engineering staff to jointly plan and coordinate both projects.

37. A National Wetlands Inventory was conducted along the proposed route. No permanent impacts to the wetlands are anticipated as a result of project construction. Structures will not be placed in wetland areas. Basin Electric will delineate wetlands as necessary to maintain a 100 ft. buffer zone around wetlands, whenever feasible, to prevent impacts. 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.

38. Basin Electric will comply with all local land use and planning ordinances.

39. 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 (RUS); Federal Aviation Administration; United States Army Corps of Engineers (USACE) Omaha District, North Dakota Regulatory Office; United States Fish and Wildlife Service (USFWS), United States Forest Service (USFS), North Dakota Ecological Services; United States Department of Agriculture (USDA), Natural Resources Conservation Service; United States Department of the Interior – National Park Service;

b. State Agencies – State Historical Society of North Dakota, State Historic Preservation Office (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 Department of Trust Lands; and

c. Local Entities – County Commissioners, County Zoning Boards and Township Commissioners.

40. Agency consultations and comments were included within the Application (see Section 7.11 and Appendix G), as well as in the exhibits and the testimony presented at the public hearings.

41. The United States Department of Agriculture (USDA) Rural Utilities Service (RUS), the USFS and Western Area Power Administration (Western) as federal agencies are required to complete an Environmental Impact Statement of the Project under the National Environmental Policy Act (NEPA). Basin Electric will file a copy of the final document and any resulting findings with the Commission prior to beginning construction of the Project.

42. Section 49-22-16(3) of the North Dakota Century Code provides that an applicant for a route permit from the Commission shall obtain all permits that may be required to construct and operate the transmission facility. Basin Electric's application and supplemental filings include a listing of permits and approvals that must be obtained for the proposed transmission facility and the status of each of these permits or approvals.

## 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 on 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 the majority of 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 No. 152 is issued to Basin Electric, designating a 150 foot wide corridor for the 345 kV portion of the project and a 125 foot-wide corridor for the 230 kV portions of the project, as described in Basin Electric's Application and supplemental filings and at the hearing.

3. Route Permit No. 164 is issued to Basin Electric, granting authority to construct, operate and maintain its AVS to Neset transmission project.

4. Basin Electric shall complete cultural resource surveys on all remaining un-surveyed parcels and shall file with the Commission documentation showing SHPO concurrence that no historic properties or sites will be affected prior to beginning construction in areas associated with each report.

5. Basin Electric shall complete SHPO recommendations and obtain SHPO concurrence that no historic properties or sites will be affected prior to beginning construction in the Killdeer Battlefield Study Area.

6. Basin Electric shall file with the Commission a copy of the final federal Environmental Impact Statement and resulting findings prior to beginning construction.

7. Prior to construction on the Judson to Tande segment, Basin Electric shall provide the Commission with a letter from the Williston City Commission on their concurrence that the Project will not interfere with the Soulin Field Airport Project.

8. Basin Electric shall file wetland delineation reports prior to construction in wetland areas,

9. The August 26, 2013, Certification Relating to Order Provisions – Transmission Facility Siting (Certification), with accompanying Tree and Shrub Mitigation Specifications, is incorporated by reference and attached to this Order.

10. To the extent there are any conflicts or inconsistencies between Basin Electric's Applications and the August 26, 2013, Certification, the Certification provisions control.

**PUBLIC SERVICE COMMISSION**

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| **Randy Christmann**<br>**Commissioner** | **Brian P. Kalk**<br>**Chairman** | **Julie Fedorchak**<br>**Commissioner** |

# PUBLIC SERVICE COMMISSION

# STATE OF NORTH DAKOTA

**Certificate of Corridor Compatibility Number 152**

*This is to certify that the Commission has designated a transmission facility corridor for Basin Electric Power Cooperative for approximately 197 miles of new, high voltage 345 kV and 230 kV alternating current transmission line and associated facilities extending from Basin Electric's existing Antelope Valley Station and terminating at the Neset 230 kV Substation located near Tioga, North Dakota*

*This certificate is issued in accordance with the Findings of Fact, Conclusions of Law and Order Order of this Commission dated April 23, 2014 in Case No. PU-11-696 and is subject to the conditions and limitations noted in the Order.*

*Bismarck, North Dakota, April 23, 2014.*

***ATTEST:***

Danell Nitschke

***Executive Secretary***

***PUBLIC SERVICE COMMISSION***

***Commissioner***

# PUBLIC SERVICE COMMISSION

# STATE OF NORTH DAKOTA

## Route Permit Number 164

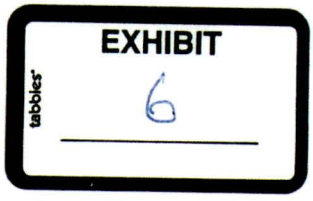
*This is to certify that the Commission has designated a transmission facility route for Basin Electric Power Cooperative for approximately 197 miles of new, high voltage 345 kV and 230 kV alternating current transmission line and associated facilities extending from Basin Electric's existing Antelope Valley Station and terminating at the Neset 230 kV Substation located near Tioga, North Dakota*

*This permit is issued in accordance with the Findings of Fact, Conclusions of Law and Order of this Commission dated April 23, 2014 in Case No. PU-11-696 and is subject to the conditions and limitations noted in the Order.*

*Bismarck, North Dakota, April 23, 2014.*

***ATTEST:*** ***PUBLIC SERVICE COMMISSION***

***Executive Secretary*** ***Commissioner***




**STATE OF NORTH DAKOTA**

**PUBLIC SERVICE COMMISSION**

**Basin Electric Power Cooperative** **Case No. PU-11-696**
**345 kV Trans. Line – Mercer, Dunn, McKenzie, Williams**
**Siting Application**

**CERTIFICATION RELATING TO ORDER PROVISIONS**
**TRANSMISSION FACILITY SITING**

I am Duey Marthaller, a representative of Basin Electric Power Cooperative ("Company") with authority to bind Company to requirements to be set forth by the Commission in its Order and I certify the following:

1. Company understands and agrees that any Certificate of Corridor Compatibility or Route Permit issued by the Commission will be subject to the conditions and criteria set forth in Chapter 49-22 of the North Dakota Century Code and Chapter 69-06-08 of the North Dakota Administrative Code, and that Company shall be responsible for compliance with this order and conditions and criteria set forth in the applicable laws and rules.

2. Company agrees to hold a preconstruction conference prior to commencement of any construction, which must include a Company representative, its construction supervisor, and a representative of Commission Staff, to ensure that Company fully understands the conditions set forth in the Commission's order.

3. Company agrees to comply with the rules and regulations of all other agencies having jurisdiction over any phase of the transmission facility including all city, township, and county zoning regulations.

4. Company understands and agrees that it shall obtain all other necessary licenses and permits, and shall provide copies of all licenses and permits to the Commission prior to construction activity associated with the transmission facility that requires said license or permit.

5. Company agrees to inform the Commission and the Commission's third-party construction inspector of its intent to start construction on the transmission facility prior to the commencement of construction. Once construction has started, Company shall keep the Commission and the Commission's third-party construction inspector updated on construction activities on a weekly basis.

6. Company understands and agrees that any Certificate of Corridor Compatibility or Route Permit issued by the Commission is subject to suspension or revocation and may, in an appropriate and proper case, be suspended or revoked for failure to

comply with the Commission's order, the conditions and criteria of the certificate or subsequent modification, or failure to comply with the applicable statutes, rules, regulations, standards, and permits of other state or federal agencies.

7. Company agrees to maintain records that will demonstrate that it has complied with the requirements of the Commission's order issuing a Certificate of Corridor Compatibility or Route Permit, and that it will preserve these records for Commission inspection at any reasonable time upon reasonable notice.

8. Company agrees to construct and operate the transmission facility in the manner described in Company's application, in any late filed exhibits, and supplemental materials (Application). To the extent there are any conflicts or inconsistencies between Company's Application and the provisions in this Certification Relating to Order Provisions, the Certification provisions control.

9. Company agrees to report promptly to the Commission the presence in the permit area of any critical habitat or threatened species, endangered species, bald eagles, or golden eagles of which Company becomes aware and which were not previously reported to the Commission.

10. Company understands and agrees that all cultural resource mitigation plans must be submitted to the North Dakota State Historic Preservation Office and approved prior to the start of any fieldwork and construction activity in the affected area.

11. Company understands and agrees that if any cultural resource, paleontological site, archeological site, historical site, or grave site is discovered during construction, it must be marked, preserved and protected from further disturbances until a professional examination can be made and a report of such examination is filed with the Commission and the State Historical Society and clearance to proceed is given by the Commission.

12. Company understands and agrees that all buried facility crossings of graded roads must be bored unless the responsible governing agency specifically permits Company to open cut the road.

13. Company understands and agrees that all pre-existing township and county roads and lanes used during construction must be repaired or restored to a condition that is equal to or better than the condition prior to the construction of the transmission facility and that will accommodate their previous use, and that areas used as temporary roads or working areas during construction must be restored to their original condition.

14. Company understands and agrees that construction must be suspended when weather conditions are such that construction activities will cause irreparable

damage to roads or land, unless adequate protection measures approved by the Commission are taken.

15. Company understands and agrees that all topsoil, up to 12 inches, or topsoil to the depth of cultivation, whichever is greater, over and along trench areas where cuts will be made, must be stripped and segregated from the subsoil. Any area on which excavated subsoil will be placed must also be stripped of topsoil. After backfilling is completed, any excess subsoil must be placed over the excavation area, blending the grade into existing topography. Topsoil must be replaced over areas from which it was stripped only after the subsoil is replaced.

16. Company understands and agrees that reclamation, fertilization, and reseeding is to be done according to the Natural Resources Conservation Service recommendations, unless otherwise specified by the landowner and approved by the Commission.

17. Company understands and agrees that its obligation for reclamation and maintenance of the right-of-way will continue throughout the life of the transmission facility.

18. Company understands and agrees that its obligation for reclamation and maintenance of the transmission facility, associated facilities, and roadways will continue throughout the life of the transmission facility.

19. Company agrees to comply with the Tree and Shrub Mitigation Specifications, attached.

20. Company understands and agrees that it shall work with landowners and residents to mitigate any increase in television and residential radio interference that results from the construction of the transmission facility.

21. Company understands and agrees that it shall repair or replace all fences and gates removed or damaged during all phases of construction and operation of the transmission facility.

22. Company understands and agrees that it shall repair or replace all drainage tile broken or damaged as a result of construction and operation of the transmission facility.

23. Company understands and agrees that staging areas or equipment shall not be located on land owned by a person other than Company unless otherwise negotiated with landowners.

24. Company understands and agrees that it shall remove all waste that is a product of construction and operation, restoration, and maintenance of the site, and properly dispose of it on a regular basis.

25. Company understands and agrees that it shall, as soon as practicable upon the completion of the construction of the transmission facility, restore the area affected by the activities to as near as is practicable to the condition as it existed prior to the beginning of construction.

26. Company understands and agrees that it shall provide any necessary safety measures for traffic control or to restrict public access to the transmission facility.

27. Company understands and agrees that it shall advise the Commission of any extraordinary events which take place at the site of the transmission facility, including injuries to any person, or the death of any threatened or endangered species on the site within five business days of such event.

28. Company understands and agrees that it shall advise the Commission of the discovery of a large number of dead birds or bats on the site within five business days of such event.

29. Company understands and agrees that it shall implement a procedure for how complaints concerning the transmission facility will be handled by Company

30. Upon request, Company agrees to provide the Commission with engineering design drawings of the transmission facility prior to construction.

31. Company understands and agrees that it shall inform the Commission in writing of any plans to modify the transmission facility or of any plans to modify the site plan for the transmission facility. Company understands and agrees to obtain written approval from the Commission prior to any modifications to the site plan or the transmission facility. Approval may be granted after notice and opportunity for hearing.

32. Company agrees to provide the Commission with both an electronic and a paper copy of the corridor approved by the Commission and the facility design specifications for the construction of the transmission facility showing the location of the transmission facility as built, and will provide this information within 3 months of the completion of the construction. Company also agrees to provide an electronic version of the corridor approved by the Commission and the facility design specifications for the construction of the transmission facility showing the location of the transmission facility as built that can be imported into ESRI GIS mapping software within 3 months of the completion of the construction. This electronic map data must be referenced to the North Dakota coordinate system of 1983, North

and/or South zones US Survey feet (NAD 83) UTM Zone 13N or 14N feet (NAD 83), or geographic coordinate system (WGS 84) feet. The vertical data must be in the appropriate vertical datum for the coordinate system used. All submissions must specify the datum in which the data was developed.

33. Company understands and agrees that the authorizations granted by any Certificate of Corridor Compatibility or Route Permit issued by the Commission for the transmission facility are subject to modification by order of the Commission if deemed necessary to protect further the public or the environment.

34. Company understands and agrees that in the event Company desires to construct, within any corridor granted by a Certificate of Corridor Compatibility in this proceeding, a transmission facility or energy conversion facility that was not included in Company's application in this proceeding, Company shall apply to the Commission for a Route Permit or Site Certificate for the facility.

35. Company shall notify the Commission, as soon as reasonably possible, if any damage, as defined by North Dakota Century Code Chapter 49-23, occurs to underground facilities during construction conducted under the certificate or permit issued in this proceeding. In the event of any damage to underground facilities, Company shall suspend construction in the vicinity of the damage until compliance with One-Call Excavation Notice System requirements under North Dakota Century Code Chapter 49-23 has been determined and clearance to proceed has been given by the Commission.

36. Company understands and agrees that the corridor certificate and route permit are subject to suspension or revocation and may, after hearing, be suspended or revoked for failure to comply with the Commission's order, requirements of the One-Call Excavation Notice System under North Dakota Century Code Chapter 49-23, the conditions and criteria of the certificate or permit or subsequent modification, or failure to comply with applicable statutes, or rules, regulations, standards, and permits of other state or federal agencies.

Dated this 26 day of August, 2013.

BASIN ELECTRIC POWER COOPERATIVE

By Duane A Marthaller
Duey Marthaller

Its Manager Civil Engineering

**STATE OF NORTH DAKOTA**

**PUBLIC SERVICE COMMISSION**

**Basin Electric Power Cooperative**
**345 kV Trans. Line – Mercer, Dunn, McKenzie, Williams**
**Siting Application**

**Case No. PU-11-696**

## Tree and Shrub Mitigation Specifications

### Inventory

1. Trees and shrubs anticipated to be cleared, including those that are considered invasive species or noxious weeds (*e.g., Caragana arborescens, Elaeagnus angustifolia, Rhamnus cathartica, Tamarix chinensis, T. parviflora, T. ramosissima, Ulmus pumila*), must be inventoried before cutting. The inventory must record the location, number, and species of trees and shrubs.

2. In windbreaks, shelterbelts and other planted areas, trees or shrubs anticipated to be cleared, regardless of size, must be inventoried for replacement.

3. In native growth areas, trees anticipated to be cleared that are 1 inch diameter at breast height (dbh) or greater must be inventoried for replacement.

4. In native growth areas, shrubs anticipated to be cleared in the permanent right-of-way must be inventoried for replacement.

5. In native growth areas outside the permanent right-of-way, shrubs must be cut flush with the surface of the ground, taking care to leave the naturally occurring seed bank and root stock intact. If soil disturbance is necessary, the native topsoil must be preserved and replaced after construction. Shrubs must be allowed to regenerate naturally where native topsoil is preserved and replaced. Where native topsoil is not preserved and replaced, shrubs anticipated to be cleared must be inventoried for replacement.

6. In native growth areas, trees and shrubs may be inventoried by actual count or by a sampling method that will properly represent the woody vegetation population. A sampling plan developed by the company, filed with the North Dakota Public Service Commission (Commission) and approved prior to the start of construction must define the sampling method to be used for trees, for tall shrubs and for low shrubs. The data from the sample plots must be extrapolated to the total acreage of the wooded area to be cleared to determine the species and quantity of trees and shrubs to be replaced.

**Clearing for Construction**

7. Trees and shrubs must be selectively cleared, leaving mature trees and shrubs intact where practical.

8. The maximum width of clear cuts through windbreaks, shelterbelts and all other wooded areas is 50 feet, unless otherwise approved by the Commission.

9. If the area of trees or shrubs actually cleared differs from the area inventoried, the difference in number of trees and shrubs to be replaced must be noted on the inventory.

**Replacement**

10. Prior to tree and shrub replacement, documentation identifying the number and variety of trees and shrubs removed, as well as the mitigation plan for the proposed number, variety, type, location and date of replacement plantings, must be filed with the Commission for approval.

11. Two 2-year-old saplings must be planted for every one tree removed. Two shrubs (stem cuttings) must be planted for every one shrub removed.

12. Except in the case of invasive or noxious species, trees and shrubs must be replaced by the same species or similar species, suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service.

Invasive or noxious species must be replaced by similar non-invasive or non-noxious species suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service.

13. Landowners must be given the option of having replacement trees and shrubs planted on the landowner's property, either on or off the right-of-way. The landowner must also be given the opportunity to waive those options in writing in order to have replacement trees and shrubs planted off the landowner's property.

14. At the conclusion of the project, documentation identifying the actual number, variety, type, location and date of the replacement plantings must be filed with the Commission.

15. Tree and shrub replacements must be inspected annually, in September, for three years. The first annual inspection must be at least one year from the anniversary date of the original plantings. A report of each annual inspection must be submitted to the Commission by October 1 of each year, documenting the condition of plantings and any woodlands work completed as of September of each year. If after the third annual report the survival rate is less than 75%, the Commission may order additional planting(s).