STATE OF NORTH DAKOTA
PUBLIC SERVICE COMMISSION

Antelope Hills Wind Project, LLC
345 kV Transmission Line - Mercer County
Siting Application

Case No. PU-14-678

FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER
January 7, 2015

Appearances

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

Brian Bjella, Attorney at Law, Crowley Fleck PLLP, 100 West Broadway, Suite 250, Bismarck, North Dakota 58501, on behalf of Applicant, Antelope Hills Wind Project, LLC.

Mitchell D. Armstrong, Attorney at Law, PO Box 460, Bismarck, North Dakota 58502-0460, Special Assistant Attorney General 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 58503.

Preliminary Statement

On August 12, 2014, Antelope Hills Wind Project, LLC (Antelope Hills) filed Applications for a Certificate of Corridor Compatibility, Route Permit and Waiver of Procedures and Time Schedules to authorize construction of a 345 kV transmission line to be located in Mercer County, North Dakota.

On September 17, 2014, the Commission deemed the Applications complete and issued a Notice of Filings and Notice of Hearings scheduling a public hearing for October 23, 2014, at 1:00 p.m. CDT at the Council Chambers, 120 North Central Avenue, Beulah, North Dakota 58523. The Notice identified the following issues to be considered in Antelope Hills' 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 identified the following issues to be considered in Antelope Hills' applications 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. 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?

On September 17, 2014, Antelope Hills filed certain pre-filed exhibits. On October 9, 2014, Antelope Hills filed an updated acoustic analysis, replacement pages and figures for the application. On October 14, 2014, Antelope Hills filed revised maps.

On October 6, 2014, the North Dakota Department of Health filed comments with respect to the project with the Commission.

On October 21, 2014, Antelope Hills filed an executed Certification Relating to Order Provisions – Transmission Facility Siting.

On October 23, 2014, a public hearing was held as scheduled.

On November 3, 2014, Antelope Hills filed late-filed Exhibit Nos. 3, 4, 5 and 6. On November 19, 2014, Antelope Hills filed late-filed Exhibit No. 7.

On December 12, 2014, Antelope Hills filed a copy of a November 10, 2014 letter from the State historical Society of North Dakota (SHPO) stating that SHPO reviewed Antelope Hills' Class III cultural resource inventory report and finds it acceptable.

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. Antelope Hills Wind Project, LLC is a Delaware Limited Liability Company headquartered in Santa Barbara, California, and is registered to do business in the State of North Dakota.

2. Antelope Hills proposes to construct approximately 9.5 miles of 345 kV electric transmission line and associated facilities in northwestern Mercer County, North Dakota, northwest of the town of Beulah, and north of the towns of Zap and Golden Valley. The transmission line will begin at the project collector substation for the wind energy project considered by the Commission in Case No. PU-14-679. At the wind energy project substation, power from the wind turbines will be aggregated and stepped up to a transmission line voltage of 345 kV. The end point of the transmission line is located within the switchyard of Basin Electric Power Cooperative's Antelope Valley Station.

3. The transmission line will be a single circuit three-phase, 345 kV transmission line. The eastern approximate three miles of the transmission line will share an existing transmission corridor with a 69 kV transmission line operated by Roughrider Electric Cooperative (Roughrider) and The Coteau Properties Company (Coteau). This eastern portion of the transmission line project is referred to as the Roughrider/Coteau Underbuild Segment. Antelope Hills, Coteau and Roughrider will enter into a joint pole use agreement and easement whereby the existing double circuit 69 kV line will be removed and replaced with new monopole structures that would support Antelope Hills' proposed 345 kV line with an underbuild to support the double circuit 69 kV line operated by Coteau and Roughrider.

4. The project will use either wooden H-frame or tubular steel monopole structures. Within the Roughrider/Coteau Underbuild Segment, each pole segment will be approximately 130 feet tall, and embedded into the ground approximately 20-30 feet deep. The Roughrider/Coteau Underbuild Segment will primarily use steel monopoles. The western segment of the transmission line would use either wood H-frame supports or steel monopoles. Within the western segment, the wood H-frames would be approximately 80 feet tall and would be buried approximately 13-18 feet deep. Steel monopoles would be approximately 110 feet tall and would be buried approximately 15-20 feet deep. A typical span length in the western segment is approximately 700 feet between poles, while in the Roughrider/Coteau Underbuild Segment the poles would be approximately 300 feet apart.

5. The transmission line will require approximately 89 pole structures, three of which will be located within the Antelope Valley substation switchyard. The locations of the poles are depicted on Antelope Hills Late Filed Exhibit No. 3.

6. The transmission line will be constructed pursuant to National Electric Safety Code requirements.

7. The transmission line will include a shield wire strung at the top of the poles to provide lighting protection. The shield wire will contain a fiberoptic core that forms a part of the communication system for the transmission line, allowing for monitoring and remote control of substation and interconnection facility components.

8. Within the Antelope Valley Station switchyard, improvements include a 345 kV power circuit breaker, three disconnect switches and motor operators, two 345 kV take-off structures, associated relay panels, and steel and bus work.

9. The transmission line will be operated in conjunction with the Antelope Hills Wind Energy Center, through its Supervisory Control and Data Acquisition (SCADA) system.

10. All easements have been secured for the western 6.5 miles of the project. Antelope Hills is in the final stages of executing the joint pole use agreement and sub easement with Coteau and Roughrider for the final three miles of the route within the Roughrider/Coteau Underbuild Segment.

11. The approximate cost of the transmission line is $9 million.

12. Antelope Hills has signed a Purchase Power Agreement with Basin Electric Power Cooperative to deliver energy produced at its Antelope Hills Wind Energy Center through the transmission line to the Antelope Valley Station switchyard.

13. Antelope Hills considered several route alternatives. The route it has requested represents the shortest feasible pathway between the wind energy center substation and the point of interconnection at the Antelope Valley substation. Antelope Hills considered a north alternative that was eliminated because it was substantially longer with potentially higher environmental costs and potential impacts on future mining operations at Coteau's Freedom Mine.

14. Antelope Hills analyzed several alternatives for entry of the transmission line into the Antelope Valley Station. This included consideration of co-locating with other transmission lines already in the vicinity. After discussions with the Western Area Power Administrative (WAPA), who manages the electricity queue on behalf of Basin Electric Power Cooperative, discussions occurred over whether to have interconnection onto an existing 345 kV line. However, WAPA preferred interconnecting at the Antelope Valley Station rather than creating a new switchyard on one of the existing 345 kV transmission lines. As a result, Antelope Hills' interconnection request which was

submitted to WAPA in 2010 set forth WAPA's preferred alternative of having the interconnection within the Antelope Valley Station.

15. Antelope Hills considered an interconnection with Basin Electric's proposed AVS-Neset transmission line which has yet to be constructed. However, this alternative was deemed infeasible as it would have invalidated Antelope's existing interconnection queue position by switching the point of interconnect. Antelope Hills considered an alternative of adding a second circuit to the planned AVS-Neset line in the final three miles before it enters Antelope Valley Station. However, the timing of the planned commercial operation for the AVS-Neset line does not correspond with the Antelope Hills Wind Energy Center schedule. In addition, Basin had concerns that considering this request could have resulted in substantial delays as a result in the need to revise permit applications for the pending AVS-Neset transmission line. Antelope Hills considered routing options parallel with the existing AVS-Broadband line for the final three miles into the Antelope Valley Station, but these options were infeasible due to future operations of the Freedom Mine and archaeological sites found in close proximity.

16. Antelope Hills reports that it contacted WAPA in the spring of 2014 and again requested consideration of an alternative placing a portion of this transmission line onto an existing transmission line. WAPA indicated that revising the point of interconnect to an alternative location could not be done with the existing queue position. If Antelope Hills requested to move the location of the point of interconnection, it would have resulted in a new queue position requiring new queue studies, which would likely take several years to complete. The alternative was rejected due to the time delays that would occur and the uncertainty associated with the cost of new system upgrades that could be required based on the new queue studies.

17. Construction of the transmission line will be coordinated with the construction of the Antelope Hills Wind Energy Center. It is anticipated Antelope Hills could start construction early in 2015, with testing to be completed in late 2015 and commercial operation in December of 2015.

18. Antelope Hills has provided information about the project to the Mercer County Emergency Management Services Department and the Mercer County Sheriff's Department.

19. The Mercer County Commission issued a Certificate of Approval of a Conditional Use Permit for this transmission line on October 1, 2014.

Siting Criteria

20. North Dakota Administrative Code Chapter 69-06-08-02 sets forth criteria to guide and govern the preparation of the inventory of exclusion and avoidance areas, and the corridor and route suitability evaluation process for transmission facilities. The criteria set forth are classified as Exclusion Areas, Avoidance Areas, Selection Criteria, and Policy Criteria.

21. Exclusion Areas must be excluded in the construction and the consideration of a route for a transmission facility. Exclusion Areas may be located within the corridor, but at no point shall such an area encompass more than 50% of the corridor width unless there is no reasonable alternative. A buffer zone of a reasonable width to protect the integrity of an Exclusion Area must be included in the siting of the transmission facility.

22. No Exclusion Areas have been identified within the proposed corridor.

23. Avoidance Areas may not be considered in routing of a transmission facility unless the applicant shows that under the circumstances there is no reasonable alternative. In determining whether an Avoidance Area should be designated for a transmission facility, the Commission may consider, among other things: the proposed management of adverse impacts; the orderly siting of facilities; system reliability and integrity; the efficient use of resources; and alternate routes.

24. There are no occupied residences, schools or places of business within 500 feet of the transmission line. A Class III Environmental Cultural Resources inventory has been completed for the proposed 250 foot-wide transmission facility corridor. All sites with potentially significant cultural resources will be avoided during construction.

25. The results of the cultural resource survey have been compiled into a report and submitted to the North Dakota State Historic Preservation Office (SHPO) for review. All eligible archeological and/or historical sites that were identified during the surveys or previously documented in SHPO's database have been avoided.

26. No Avoidance Areas will be impacted by the project.

27. In accordance with the Commission's Selection Criteria, a transmission facility shall be approved only if it is demonstrated that no significant adverse impacts will result from the location, construction, and maintenance of the transmission facility.

28. With respect to agricultural production only approximately 0.2 acres of land will be permanently impacted, with approximately 67 acres temporarily impacted during construction.

29. Based on current design, impacts to wetlands will be avoided. Transmission pole supports and temporary access routes will avoid wetlands and minimize the need to cross drainage bottoms.

30. Based upon the Federal Aviation Administration's online Department of Defense Preliminary Screening Tool, no impacts to any radar systems, radio signals, television signals, satellite or phone signals, GPS signals, air defense radar, homeland security radar, or weather surveillance radar are anticipated.

31. Antelope Hills conducted an avian survey, sharp-tailed grouse Lek aerial survey, a raptor survey and a study of bat activity. No federally endangered, threatened or candidate species were recorded. No potentially occupied or occupied eagle nests are located within the corridor or in a one-mile buffer.

32. Antelope Hills contracted for an analysis of potential whooping crane habitat in the area of the wind energy facility and the transmission line. No confirmed whooping crane sitings have been documented.

33. Antelope Hills has consulted with the United States Fish and Wildlife Service and the North Dakota Game and Fish Department with respect to the siting of the proposed transmission line. Antelope Hills is continuing to work with the wildlife agencies to minimize and reduce any impacts associated with the Project.

34. The project will not have a significant impact on the Selection Criteria set forth in North Dakota Administrative Code § 69-06-08-02(3). Any adverse affects on natural resources will be managed and maintained at an acceptable minimum. Once the project is completed, Antelope Hills will restore all disturbed areas.

35. In accordance with the Commission's Policy Criteria, preference will be given to an applicant that maximizes benefits resulting from the adoption of certain policies and practices. With respect to a commitment of a portion of the transmission project for use in this state, energy produced from the Antelope Hills Wind Energy Center will be delivered into the Antelope Valley substation on the proposed transmission line, from which it will be distributed to customers of Basin Electric Power Cooperative.

36. Antelope Hills has demonstrated its commitment to maximize the benefits of the project so as to meet the Policy Criteria set forth in North Dakota Administrative Code § 69-06-08-04(4) by designing and locating the project in a manner as to maximize operational efficiency and economic benefits while minimizing impacts on agriculture, extractible resources, health and safety, plants and animal life, communications, and the visual effect on the surrounding area.

37. Antelope Hills has agreed to certain steps to mitigate the impact of the project as indicated by its execution of the Certification Relating to Order Provisions – Transmission Line Facility with accompanying Tree and Shrub Mitigation Specifications, which has been filed with the Commission.

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

Conclusions of Law

1. The Commission has jurisdiction over this matter pursuant to North Dakota Century Code Chapter 49-22.

2. The proposed transmission line and associated facilities are transmission facilities as defined by North Dakota Century Code § 49-22-03(12).

3. The location, construction and operation of the proposed transmission facilities will produce only minimal adverse effects on the environment and upon the welfare of the citizens of North Dakota.

4. The application submitted by Antelope Hills meets the corridor and route evaluation criteria required by North Dakota Century Code Chapter 49-22.

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 transmission facilities are compatible with the environmental preservation and the efficient use of resources.

7. The requested waivers of procedures and time schedules are granted because the proposed transmission corridor and route are of such length, design, location and purpose that they will produce minimal adverse effects.

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

Order

The Commission orders:

1. Antelope Hills application for waiver of procedures and time schedules is granted.

2. Certificate of Corridor Compatibility No. 161 is issued to Antelope Hills designating a transmission facility corridor for the construction, operation and maintenance of the proposed 345 kV transmission line and associated facilities in Mercer County, North Dakota. For purposes of the Certificate, the corridor will consist of a 250 foot wide area centered on the proposed route.

3. Route Permit No. 173 is issued to Antelope Hills granting authority to construct and operate the proposed 345 kV approximate 9.5 mile transmission line and associated facilities in Mercer County, North Dakota, as described in the application, supplements to the application, at the public hearing, and in late-filed exhibits.

4. The Certification Relating to Order Provisions – Transmission Facility Siting with accompanying Tree and Shrub Mitigation specifications as filed with the Commission on October 21, 2014, are incorporated by reference and attached to this Order.

PUBLIC SERVICE COMMISSION

Randy Christmann
Commissioner

Julie Fedorchak
Chairman

Brian P. Kalk
Commissioner

PUBLIC SERVICE COMMISSION

STATE OF NORTH DAKOTA

Route Permit Number 173

This is to certify that the Commission has designated a transmission facility route for Antelope Hills Wind Project, LLC for the construction of approximately 9.5 miles of 345 kV electric transmission line and associated facilities extending from the Antelope Hills Wind Project collector substation to the Antelope Valley Station (AVS) switchyard substation in Mercer County, North Dakota.

This permit is issued in accordance with the Order of this Commission dated January 7, 2015 in Case No. PU-14-678 and is subject to the conditions and limitations noted in the Order.

Bismarck, North Dakota, January 7, 2015.

ATTEST: ***PUBLIC SERVICE COMMISSION***

Executive Secretary ***Commissioner***

PUBLIC SERVICE COMMISSION

STATE OF NORTH DAKOTA

Certificate of Corridor Compatibility Number 161

This is to certify that the Commission has designated a transmission facility corridor for Antelope Hills Wind Project, LLC for the construction of approximately 9.5 miles of 345 kV electric transmission line and associated facilities extending from the Antelope Hills Wind Project collector substation to the Antelope Valley Station (AVS) switchyard substation in Mercer County, North Dakota.

This certificate is issued in accordance with the Order of the Commission dated January 7, 2015 in Case No. PU-14-678 and is subject to the conditions and limitations noted in the Order.

Bismarck, North Dakota, January 7, 2015.

ATTEST: ***PUBLIC SERVICE COMMISSION***

Executive Secretary ***Commissioner***