

2.0 PSC SITING CRITERIA

2.1 AVOIDANCE AND EXCLUSION AREAS

As illustrated in Figure 3, Antelope’s environmental consultant, TRC, created a map depicting the revised turbine layout’s compliance with the Siting Criteria’s avoidance and exclusion areas in the vicinity of the Project. In all cases where turbines have been relocated, Antelope has complied with all applicable setbacks from non-participating landowners. As a result all turbines have been located in the Feasible Turbine Placement Area (i.e., non-setback or non-exclusion areas).

2.2 SELECTION AND POLICY CRITERIA

In accordance with ND AC Section 69-06-08-01-3, a site shall be approved in an area only when it is demonstrated to the PSC by the applicant that any significant adverse effects resulting from the location, construction, and operation of the facility in that area, as they relate to the criteria listed in the following tables.

Exclusion Areas.

NDAC 69-06- 08-01	Exclusion Area	Present within Project Area?	Description	Turbine Adjustment Impact?
1a.	Designated or registered national areas: parks; memorial parks; historic sites and landmarks; natural landmarks; historic districts; monuments; wilderness areas; wildlife areas; wild, scenic, or recreational rivers; wildlife refuges; and grasslands.	Not Present.	N/A.	No change.

Amendment PSC Application – Antelope Hills Wind Project

Exclusion Areas (Continued)

NDAC 69-06- 08-01	Exclusion Area	Present within Project Area?	Description	Turbine Adjustment Impact?
1b.	Designated or registered state areas: parks; forests; forest management lands; historic sites; monuments; historical markers; archaeological sites; grasslands; wild, scenic, or recreational rivers; game refuges; game management areas; management areas; and nature preserves.	Potentially Present	No NRHP-listed or eligible sites are known to exist in the Project Area. An additional cultural resource survey for the revised disturbance areas is in the process of being completed. Any historic, cultural, or archaeological sites that are discovered during Class III Pedestrian surveys or during construction will be avoided as necessary. The cultural resource survey report will be reviewed and accepted by the North Dakota State Historic Preservation Office. This Amended Application will be supplemented to include a copy of the North Dakota State Historic Preservation Office concurrence letter when it is available.	No change.
1c.	County parks and recreational areas; municipal parks; parks owned or administered by other governmental subdivisions; hardwood draws; and enrolled woodlands.	Not Present.	N/A.	No change.
1d.	Prime farmland and unique farmland, as defined by the land inventory and monitoring division of the soil conservation service, United States department of agriculture, in 7 C.F.R. part 657; provided, however, that if the Commission finds that the prime farmland and unique farmland that will be removed from use for the life of the facility is of such small acreage as to be of negligible impact on agricultural productions, such exclusion shall not apply.	Present.	Prime farmland is present, and makes up approximately 6.8% of the Project Area. Prime farmland will be avoided during final design, to the extent practical. Unavoidable impacts to Prime Farmland soils would have a negligible impact to agricultural operations.	No change.

Amendment PSC Application – Antelope Hills Wind Project

Exclusion Areas (Continued)

NDAC 69-06- 08-01	Exclusion Area	Present within Project Area?	Description	Turbine Adjustment Impact?
1e.	Irrigated land.	Not Present.	N/A.	No change.
1f.	Areas critical to threatened or endangered animal or plant species.	Not Present.	N/A.	No change.
1g.	Areas where animal or plant species that are unique or rare to this state would be irreversibly damaged.	Not Present.	N/A.	No change.
1h.	Areas within 1,200 feet of the geographic center of an intercontinental ballistic missile (ICBM) launch or launch control facility.	Not Present.	N/A.	No change.
2a.	Areas less than:			
(1)	One and one-tenth times the height of the turbine from interstate or state roadway right of way	Not Present.	Required setbacks to public roads have been incorporated into the proposed layouts.	No change.
(2)	One and one-tenth times the height of the turbine plus seventy-five feet from the centerline of any county or maintained township roadway	Not Present.	Required setbacks to public roads have been incorporated into the proposed layouts. Where both state and county setbacks apply, the more restrictive setback was used.	No change.
(3)	One and one-tenth times the height of the turbine from any railroad right of way	Not Present.	N/A.	No change.
(4)	One and one-tenth times the height of the turbine from a one hundred fifteen kilovolt or higher transmission line	Present.	Required setbacks to transmission lines have been incorporated into the proposed layouts. Where both state and county setbacks apply, the more restrictive setback was used.	No change.

Amendment PSC Application – Antelope Hills Wind Project

Exclusion Area (Continued)

NDAC 69-06- 08-01	Exclusion Area	Present within Project Area?	Description	Turbine Adjustment Impact?
(5)	One and one-tenth times the height of the turbine from the property line of a nonparticipating landowner, unless a variance is granted. A variance may be granted if an authorized representative or agent of the permittee and affected parties with associated wind rights file a written agreement expressing all parties' support for a variance to reduce the setback requirement in this subsection. A nonparticipating landowner is a landowner that has not signed a wind option or an easement agreement with the permittee of the wind energy conversion facility as defined in North Dakota Century Code chapter 17-04.	Present.	Required setbacks to nonparticipating lands have been incorporated into the proposed layouts, unless the affected nonparticipating landowner has agreed to a reduced setback.	No change.

Avoidance Areas.

NDAC 69-06- 08-01	Avoidance Area	Present within Project Area?	Description	Turbine Adjustment Impact?
3a.	Historical resources which are not designated as exclusion areas.	Present	A Class III cultural resources inventory is in the process of being completed for the Project. Sites with potential cultural resources will be avoided.	No change.
3b.	Areas within the city limits of a city or the boundaries of a military installation.	Not Present.	N/A.	No change.
3c.	Areas within known floodplains as defined by the geographical boundaries of the 100-year flood.	Not Present.	N/A.	No change.
3d.	Areas that are geologically unstable.	Not Present.	N/A.	No change.

Amendment PSC Application – Antelope Hills Wind Project

Avoidance Areas (Continued)

NDAC 69-06- 08-01	Avoidance Area	Present within Project Area?	Description	Turbine Adjustment Impact?
3e.	Wetlands	Present.	A wetland delineation project has been completed and potential jurisdictional wetlands and waters of the U.S. have been identified. As a result, the location of numerous roads have been changed in order to minimize potential impacts to wetlands and waters of the US. There will be minimal impacts to wetlands and waters of the US and Antelope has applied to the US Army Corps of Engineers for coverage under a Nationwide permit for this project. Coverage under a Nationwide permit is limited to no more than 0.5 acres of permanent impacts to wetlands and no more than 300 feet of waters of the US. Antelope is currently in the process of securing coverage from the U.S. Army Corps of Engineers for inclusion under a Nationwide permit. A copy of the wetland delineation report is presented in Appendix C	No change.
3e	Woodlands	Not Present.	N/A.	No change.
3f.	Areas of recreational significance which are not designated as exclusion areas	Not Present.	N/A.	No change.
4	A wind energy conversion facility site must not include a geographic area where, due to operation of the facility, the sound levels within one hundred feet of an inhabited residence or a community building will exceed fifty dBA. The sound level avoidance area criteria may be waived in writing by the owner of the occupied residence or the community building.	Not Present.	Turbines have been sited such that noise levels within 100 feet of an occupied residence will not exceed 50 dBA.	No change. A copy of the updated noise study is presented in Appendix B.

Amendment PSC Application – Antelope Hills Wind Project

Selection Criteria.

NDAC 69-06- 08-01	Selection Criteria	Description	Turbine Adjustment Impact?
5a.	The impact upon agriculture:		
(1)	Agricultural production	Approximately 56 and 64 acres of land will be impacted over the life of the project and between 366 and 415 acres of land will be temporarily impacted during construction, depending on the turbine model selected. These impacts represent a small percentage of the land area within the 36,600-acre Project Area, most of which will continue to be available for agricultural production. These impacts are adverse but minimal.	The proposed number of turbines is being reduced between by 5 and 18 turbines (depending on the model selected) from the number of turbines approved in the approved Certificate. Therefore, the impacts to agricultural production will also be reduced.
(2)	Family farms and ranches	Although some farmland will be converted to wind turbine foundations and pads, access roads, and a substation over the life of the project, wind lease payments to farmers will provide a compensatory source of income and no adverse impacts to family farms and ranches will result. The Project will comply with setbacks for non-participating landowners.	No change.
(3)	Land which the owner demonstrates has soil, topography, drainage, and an available water supply that cause the land to be economically suitable for irrigation	No agricultural irrigation is currently present within the Project Area. No adverse effects are expected.	No change.
(4)	Surface drainage patterns and ground water flow patterns	No adverse effects are expected. A SWPPP and NDPES permit will be adhered to in order to avoid impacts to surface drainages and ground water flow patterns.	No change.
(5)	The agricultural quality of the cropland	No impacts to the agricultural quality of cropland are anticipated other than for the area directly converted to wind energy facility use. Antelope will work with the landowners to alleviate the compaction of any soils which occurs during construction.	No change.
5b.	The impact upon the availability and adequacy of:		
(1)	Law enforcement	No adverse impacts are expected.	No change.
(2)	School systems and education programs	No adverse impacts are expected.	No change.
(3)	Governmental services and facilities	No adverse impacts are expected.	No change.

Amendment PSC Application – Antelope Hills Wind Project

Selection Criteria (Continued)

NDAC 69-06- 08-01	Selection Criteria	Description	Turbine Adjustment Impact?
(4)	General and mental health care facilities	No adverse impacts are expected.	No change.
(5)	Recreational programs and facilities	No adverse impacts are expected.	No change.
(6)	Recreational programs and facilities	No adverse impacts are expected.	No change.
(7)	Retail service facilities	No adverse impacts are expected.	No change.
(8)	Utility services	No adverse impacts are expected.	No change.
5c.	The impact upon:		
(1)	Local institutions	No adverse impacts are expected.	No change.
(2)	Noise sensitive land uses	The only noise sensitive land uses within the Project Area are residences. Based on the acoustic analysis presented in Appendix B, Project-related noise levels will not violate any local, state, or federal threshold levels.	No change.
(3)	Rural residences and businesses	The Project will comply with local setbacks. No significant adverse impacts are anticipated.	No change.
(4)	Aquifers	No adverse effects are expected.	No change.
(5)	Human health and safety	No impacts to human health and safety are anticipated.	No change.
(6)	Animal health and safety	No impacts to livestock are anticipated from construction or operation of the facility. Antelope will implement measures to avoid and minimize impacts to wildlife by siting facilities away from active raptor nests and wetlands to the extent practicable.	No change.
(7)	Plant life	The Project will result in approximately 56 to 64 acres of permanent ground disturbance, depending on the turbine selected, including loss of the existing plant populations. As discussed above, this impact would be minimal in the context of the entire Project Area.	No change.
(8)	Temporary and permanent housing	No adverse impacts to housing are anticipated.	No change.
(9)	Temporary and permanent skilled and unskilled labor	No adverse impacts are anticipated. Project impacts to skilled and unskilled labor are expected to be positive.	No change.
5d.	The cumulative effect of the location of the facility in relation to existing and planned facilities and other industrial development	The Project is not anticipated to contribute to cumulative effects in relation to existing and planned facilities or other industrial development.	No change.

Amendment PSC Application – Antelope Hills Wind Project

Policy Criteria.

NDAC 69-06- 08-01	Selection Criteria	Description	Turbine Adjustment Impact?
6a.	Recycling of the conversion byproducts and effluents.	Not applicable. The Project will not create byproducts or effluent.	No change.
6b.	Energy conservation through location, process, and design.	Antelope is developing the site to maximize energy output and will develop a site layout that optimizes wind resources while minimizing the impact on land resources and any potentially sensitive areas.	No change.
6c.	Training and utilization of available labor in this state for the general and specialized skills required.	Antelope's EPC contractor will use local labor to the extent practicable.	No change.
6d.	Use of a primary energy source or raw material located within the state.	The energy generated at the site will utilize the renewable wind resources of the State of North Dakota.	No change.
6e.	Non-relocation of residents.	No residents will be relocated as a result of the Project.	No change.
6f.	The dedication of an area adjacent to the facility to land uses such as recreation, agriculture, or wildlife management.	The Project will not interfere with adjacent land uses.	No change.
6g.	Economies of construction and operation.	Antelope will utilize local contractors to the extent practicable.	No change.
6h.	Secondary uses of appropriate associated facilities for recreation and enhancement of wildlife.	None.	No change.
6i.	Use of citizen coordinating committees.	Antelope will continue to work with landowners of properties for the Project.	No change.
6j.	A commitment of a portion of the energy produced for use in this state.	Energy produced will be delivered into the Basin Electric switchyard at the Antelope Valley Station, from which it will be transmitted to customers of Basin Electric. Basin Electric's service area includes North Dakota, and a portion of the energy produced will be used in-state.	No change.
6k.	Labor relations.	No labor relations will be affected.	No change.
6l.	The coordination of facilities.	Existing facilities and facility corridors were considered in the location of the wind farm and associated facilities.	No change.
6m.	Monitoring of impacts.	Antelope and the EPC contractor will employ environmental monitors on-site as needed during construction to ensure there will be no impacts to wetlands and documented archeological sites that require avoidance, and that necessary BMPs are implemented. Post-construction monitoring will be conducted as per USFWS Wind Energy Guidelines.	No change.

Amendment PSC Application – Antelope Hills Wind Project

Mercer County Zoning Ordinance Setback Distances for Turbines from Agricultural Land Uses.

Ordinance Section	Setback Type	Setback Distance	Turbine Adjustment Impact?
Chapter 3, Section I, Conditional Uses O.4	Occupied dwellings, commercial buildings or publicly-used structures or facilities	1,000 feet.	No change.
Chapter 3, Section I, Conditional Uses O.4	Edge of right-of-way of public roads and above-ground communication and electrical lines	110 percent of total turbine height.	No change.
Chapter 3, Section I, Conditional Uses O.4	Perimeter of the facility ^{1/}	110 percent of total turbine height.	No change.
Chapter 3, Section I, Conditional Uses O.4	Property lines, unless wind easement obtained from adjoining landowner	110 percent of total turbine height.	No change.
1/ A Variance may be granted if an authorized representative or agent of the permittee and those affected parties of adjoining properties with associated wind rights, sign a formal and binding agreement expressing all parties' support for a variance that might reduce the setback requirement.			