SOUTH DAKOTA DEPARTMENT OF
GAME, FISH AND PARKS
523 EAST CAPITOL AVENUE | PIERRE, SD 57501

March 1, 2021

Christina Gomer
Western Area Power Administration
2900 4th Avenue North
Billings, MT 59101

RE: North Bend Wind Project, Hughes and Hyde Counties, South Dakota
WAPA Public Scoping Comments

Dear Christina,

Thank you for contacting South Dakota Game, Fish and Parks (GFP) regarding the proposed 200 megawatt North Bend Wind Project located in Hyde County, South Dakota. The proposed project would include the construction of approximately 90 turbines, turbine pads, access roads, underground power collection system, a new substation and a new overhead transmission line. We strive to collaborate with developers of wind projects to balance wildlife conservation with wind energy development in our state. The purpose of this letter is to provide information and recommendations for the development and siting of the proposed wind facility. We have prepared the following comments to address environmental concerns regarding threatened, endangered and rare species, areas of high conservation value, and species of concern in South Dakota. We request that the following comments and recommendations are considered as part of the Environmental Assessment (EA) to be prepared by Western Area Power Administration.

The proposed siting and operation of a wind power project has the potential to affect area wildlife by altering wildlife habitat, behavior and increasing mortality through collisions with wind turbines. Impacts to wildlife and their associated habitats can be minimized by using responsible, wildlife friendly siting recommendations early in the project planning stage of development. Additional information and recommendations on wind facility siting can be found on our website at: https://gfp.sd.gov/userdocs/docs/SDSitingGuides_2018-10-17.pdf. Please note, the GFP does not have regulatory authority regarding the siting and operation of a wind facility.

SOUTH DAKOTA NATURAL HERITAGE DATABASE

The South Dakota Natural Heritage Program monitors species at risk. Species at risk are those that are listed as threatened or endangered at the state or federal level or those that are rare. Rare species are found at the periphery of their range, have isolated populations or are species which we simply do not have extensive information. A list of species monitored by the Heritage Program can be found at https://gfp.sd.gov/natural-heritage-program/.

We have completed a search of the project area and found a record of Whooping Cranes (*Grus americana;* federally endangered) within the project area. Two additional whooping crane records were

identified approximately 5 miles east of the project area. All three records of whooping cranes using the area were observations of multiple birds on the ground (e.g. stop-over sites) for multiple days (2-5).

Please note many places in South Dakota have not been surveyed for rare or protected species and the absence of a species from the database does not preclude its presence from your project area.

HABITATS IMPORTANT TO CONSERVATION IN SOUTH DAKOTA

Native Grasslands

Grasslands are of high conservation value in South Dakota. Approximately 70% of the native mixed-grass prairie has been lost in eastern South Dakota, and approximately 32% has been lost in western South Dakota (Wright and Wimberly 2013, Bauman et al. 2014, Bauman et al. 2016, Bauman et al. 2018). Untilled grasslands, large grassland blocks (160 acres or more) and grasslands with native plant species are of particular importance and special care should be taken to avoid placing turbines in these areas. Other grassland types such as native rangeland, grazed grasslands (with native plant species), pasture (grazed grasslands with non-native plant species), and Conservation Reserve Program lands (formerly tilled lands planted to vegetative cover for erosion control and wildlife habitat) serve as wildlife habitat. Placement of project infrastructure (turbines, roads, etc.) in contiguous blocks of grassland can fragment habitat and result in less suitable habitat for grassland dependent species. Additionally, disturbance and compaction of grassland soils by construction activities (temporary or permanent) can permanently alter soil structure (Bauman et al. 2014). Early identification of grassland areas provides the information needed to avoid further grassland loss, degradation and fragmentation. The best available information on the location of untilled grasslands for South Dakota can be found in: Bauman et al. 2014, Bauman et al. 2016, and Bauman et al. 2018. These reports and associated spatial layers are available at: https://openprairie.sdstate.edu/.

Grassland Birds

Grassland nesting bird populations have been declining faster than any other bird groups in North America (Peterjohn and Sauer 1999, Rosenberg et al. 2019). Many grassland nesting bird species require large tracts of open, contiguous grasslands. Placement of turbines in large, in-tact grassland parcels can fragment habitat and displace certain species of grassland nesting birds (Shaffer and Buhl 2015).

Based on the information listed above, GFP recommends avoiding siting turbines in grassland habitats, particularly untilled native grasslands.

Wetlands

In South Dakota, the prairie pothole region encompasses almost half of the state east of the Missouri River. This region is characterized by millions of depressional wetlands, or “prairie potholes”, left behind by retreating glaciers, and surrounded with expansive grassland habitat. The unique mixture of diverse wetland types and remaining grasslands provides important breeding habitat for many grassland and wetland dependent birds. The United States portion of the prairie pothole region is often referred to as the “duck factory”; approximately 1.43 million breeding ducks settle in South Dakota.

Wetland and Shore Birds

The prairie pothole region of South Dakota supports a wide diversity of bird species (~80 species; Johnson et al. 1997). Wetland birds (such as rails, ibis, herons, bitterns, ducks, whooping cranes, etc.) can be susceptible to direct strikes with wind turbines (Johnson et al. 2002). Wind turbines can also displace nesting waterfowl pairs up to 800 meters (Loesch et al. 2013). Displacement of breeding

waterfowl from high quality habitats could result in increased predation or reduced reproduction in and around wind energy facilities (Loesch et al. 2013).

Based on the information listed above, GFP recommends avoiding siting turbines in wetlands or within wetland complexes (multiple wetland basins adjacent to each other).

Invasive and Non-native Plant Species

During the construction and maintenance phase of a wind energy facility, existing roads often experience increased traffic and new turbine access roads are constructed. This increases the amount of area disturbed and increases opportunity for the introduction and establishment of invasive, non-native plant species.

Based on the information listed above, GFP recommends controlling noxious weeds at the project site, as well as revegetating with native, weed-free seed mixes.

SPECIES OF CONCERN

Prairie Grouse

Prairie grouse (sharp-tailed grouse and greater prairie chicken) inhabit large in-tact blocks of native grassland. Development (roads, power lines, wind turbines, buildings, etc.) in and around prairie grouse habitat and leks can fragment otherwise suitable habitat and displace birds (Pruett et al. 2009). Prairie grouse and some species of grassland nesting birds are indicators of high-quality grassland habitat and a robust ecological community due to their specific habitat needs. Lek survey reports indicate the presence of up to eight prairie grouse leks within the project boundary and 1-mile survey buffer during the most recent survey (2020).

Based on the information listed above, GFP recommends a 1-mile setback of project infrastructure from active prairie grouse leks. We also recommend a two mile no construction buffer during the lekking season, 1 March to 30 June. Prairie grouse are sensitive to noise disturbance, and construction near leks could cause birds to abandon leks.

Bats

South Dakota is home to 13 different bat species. Bats are long-lived (up to 30 years) and have low reproductive rates (1-2 pups/year). Because of this, direct mortality of bats has a disproportionately larger impact to populations. Bat mortality at wind energy facilities is one of the major concerns regarding wind energy impacts on wildlife (Arnett et al. 2016, O'Shea et al. 2016). Post-construction mortality surveys from existing wind energy facilities have shown that migratory tree-roosting bats such as the hoary bat, eastern red bat and silver-haired bat, have the highest rates of mortality during their fall migration at wind energy facilities.

GFP recommends siting turbines at least 1,000 feet away from suitable bat habitat (e.g. forested areas, woody draws, etc.)

Prairie Dog Colonies

The black-tailed prairie dog is a keystone species that has a significant and unique impact on grassland ecosystems. Burrows are used for shelter and places to raise young. Prairie dog colonies may concentrate foraging raptors both during the breeding season and during migration. Many other species, such as black-footed ferret (a federally endangered species), swift fox (a state threatened species) and burrowing owls (a species of greatest conservation need) will use abandoned prairie dog

burrows. In addition, the endangered black-footed ferret primarily preys on black-tailed prairie dogs. Our data indicates the possible presence of 2-3 small prairie dog colonies within the project area.

Based on the information listed above, GFP recommends not siting turbines within or immediately adjacent to prairie dog colonies to reduce disturbance to habitat, as well as to reduce the risk of collision for avian predators that may forage in prairie dog colonies.

Whooping Cranes

The whooping crane is a state and federal endangered species with only one naturally occurring population. Members of this population pass through South Dakota as they migrate to and from Aransas National Wildlife Refuge in Texas to Wood Buffalo National Park in Canada. Whooping Cranes can be spotted almost anywhere in South Dakota during migration. However, reported sittings are most frequent near central South Dakota. Whooping cranes are large (1.5 m) birds and can have difficulty maneuvering quickly to avoid collision with powerlines and other tall structures. Powerline strikes are the most common form of mortality for fledged whooping cranes. The proposed project is located within the whooping crane migratory corridor and has known sightings of whooping cranes within and near the project boundary.

GFP recommends preparing a detailed contingency plan if whooping cranes are spotted within 2 miles of the project. We also recommend creating a detailed phone/contact tree for operations staff in the event a whooping crane is spotted. These two documents should be included in any Bird and Bat/Wildlife Conservation Strategy documents.

OTHER CONSIDERATIONS

Powerlines

New power lines/transmission lines are often associated with a proposed wind energy project. Powerline strikes and electrocutions are a known cause of mortality to birds. GFP recommends implementing mitigation measures described in The Avian Power Line Interaction Committee guidelines (https://www.aplic.org/). Additionally, GFP recommends avoiding placement of over-head powerlines adjacent to or between bodies of water (wetlands and lakes), as this could increase the risk of bird strikes, particularly for waterfowl. We further recommend burying collection and transmission lines when possible.

Post-Construction Surveys

GFP typically recommends at least 2 years of post-construction wildlife mortality monitoring. Triple H Wind Project (also owned by Engie North America) is located approximately 1 mile east of the proposed North Bend Wind Project. As part of the facility permit granted to Triple H from the South Dakota Public Utilities Commission, the applicant is required to undertake a minimum of two years of independently conducted post-construction avian and bat mortality monitoring (Condition 33). Because of the close proximity, similar habitat conditions and existing post-construction mortality monitoring requirements at Triple H, GFP is agreeable to substituting a post-construction research project to assess impacts to nesting grassland birds at the North Bend Wind Project, in-lieu of mortality monitoring. Game, Fish and Parks would prefer a study design that incorporates the BACI (before-after-control-impact) study design and methods similar to Shaffer and Buhl (2015). North Bend Wind Project is located approximately 6 miles west of the South Dakota Wind Energy Center, which was a study site used by Shaffer and Buhl (2015). Because of this close proximity, GFP believes that grassland bird research at the North Bend Wind Project presents a unique and valuable opportunity to add to wind-wildlife research efforts in the Dakotas.

We also recommend the developer draft a Bird and Bat Conservation Strategy/Wildlife Conservation Plan to include with project plans after wildlife surveys and project siting is complete (or near complete).

SUMMARY

Thank you for the opportunity to provide comments on the proposed development of the North Bend Wind Project in Hughes and Hyde Counties in South Dakota. We strive to work with developers of wind projects to balance wildlife conservation with wind energy development in our state. In summary, GFP recommends the following to avoid or minimize impacts to wildlife and wildlife habitats:

- Avoid placing project infrastructure in grassland, especially undisturbed grasslands
- Place project infrastructure in previously disturbed areas as much as possible
- Avoid placing turbines in wetlands, as well as in wetland complexes
- Control noxious weeds at the project site, as well as revegetate disturbed areas with native, weed-free seed mixes
- Avoid planning project infrastructure within 1 mile of active grouse leks
- Avoid construction within 2 miles of active grouse leks during the lekking season (March 1-June1)
- Site turbines at least 1,000 feet away from suitable bat habitat
- Avoid siting turbines within or immediately adjacent to prairie dog colonies
- Prepare a whooping crane contingency plan
- Prepare a detailed contact tree to accompany whooping crane contingency plan
- Prepare a Bird and Bat Conservation Strategy/Wildlife Conservation Plan
- Follow APLIC guidelines for designing and marking powerlines
- Complete at least two years of post-construction mortality monitoring *or* complete a post-construction research project focusing on grassland nesting birds within the project area

Please keep GFP involved in all future correspondence. For any additional questions or information, please contact me at 605.773.6208.

Sincerely,

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cc: Natalie Gates (USFWS Pierre)
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