



IN REPLY REFER TO:  
CROWNED RIDGE  
I AND II

# United States Department of the Interior

FISH AND WILDLIFE SERVICE  
South Dakota Ecological Services  
420 South Garfield Avenue, Suite 400  
Pierre, South Dakota 57501-5408  
(605) 224-8693, southdakotafieldoffice@fws.gov



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Ms. Kimberly Wells  
NextEra Energy Resources, LLC  
601 Travis Street, Suite 1900  
Houston, Texas 77002

Darren Kearney  
South Dakota Public Utilities Commission  
500 E. Capitol Avenue  
Pierre, South Dakota 57501

Dear Ms. Wells/Mr. Kearney:

This letter is in regard to the Crowned Ridge wind energy projects (I and II); we request that the South Dakota Public Utilities Commission include this letter as part of the record of evidence for these projects. Herein we convey our primary concerns, provide associated updated recommendations, and raise additional issues related to information obtained via the South Dakota Public Utilities Commission (SDPUC) website.

We have provided several letters since at least 2007 regarding this project and participated in an April 19, 2017, conference call where we learned the Crowned Ridge project would be divided into parts I and II. Summaries of wildlife/habitat studies and results to date were conveyed over the phone during that call, but prior to that, we had relatively little information on project activities, and it was not clear how or whether environmental recommendations provided to date had been considered or applied. We accessed SDPUC's website to obtain Crowned Ridge I and II application materials, including updated project maps, and wildlife/habitat surveys and information. We request that NextEra provide any existing/future Crowned Ridge reports not already on the SDPUC website; if the projects move forward this includes information regarding post-construction studies.

Our foremost concerns with the Crowned Ridge projects are potential impacts to the Topeka shiner, the Dakota skipper, and grassland/wetland habitats and associated wildlife (direct and indirect effects).

Topeka shiner

Our concerns regarding the Topeka shiner are in relation to information within the SDPUC application materials submitted by NextEra. It appears a portion of a known occupied tributary to Willow Creek exists within the Crowned Ridge I project boundary; we are uncertain whether this waterway will be affected by the project. The Crowned Ridge II project will require four crossings of Willow Creek and Stray Horse Creek during construction; these are both known occupied Topeka shiner streams. The nature of these crossings is unknown to us. The applications for both Crowned Ridge projects state: “There is no information available to determine whether the Topeka shiner currently inhabits streams in the actual Project Area or Project Construction Easement.” When actions will occur in/adjacent to waterways known to be occupied by the species, we recommend working with the assumption that Topeka shiners may be present at the sites and could be directly and/or indirectly affected by the actions. This also applies to potentially occupied waterways that are connected to the known occupied habitats (assuming water is present in both cases). We refer you to the 2018 Species Status Assessment for the Topeka shiner for maps and additional species information:

<https://ecos.fws.gov/ServCat/Reference/Profile/95656>. Please note that instream activities in known/potential Topeka shiner occupied habitats, as well as actions conducted adjacent to these areas, have the potential to adversely affect this endangered minnow (and, depending on activities conducted, may include latent impacts when water returns to a site that was impacted when the stream was dry). Best Management Practices (BMPs) are proposed in the Crowned Ridge I and II application materials to protect water quality due to actions adjacent to the stream, but without additional information, it is not clear these BMPs are adequate to preclude the potential for adverse effects to this species. If complete avoidance is not possible, further coordination with this office may be needed to ensure the proposed action does not result in section 9 violations of the Endangered Species Act (ESA). Additionally, a permit may be required for work within these waters via the U.S. Army Corps of Engineers, and section 7 consultation with this office may then be necessary to ensure ESA compliance.

Dakota skipper/Poweshiek skipperling

Regarding the Dakota skipper/Poweshiek skipperling, BMPs were submitted with the application materials that will likely reduce the risk of impacts, but it appears potential habitats for these species may still be impacted. A single survey was conducted by consultant SWCA for Dakota skippers and Poweshiek skipperlings for each Crowned Ridge project area in 2018 following the Service’s 2018 *Dakota Skipper (Hesperia dacotae) North Dakota Survey Protocol*. Neither species was detected. During our review of the reports submitted for these surveys, however, we noticed several issues of concern:

- The survey reports appear to indicate that thousands of acres identified as potentially suitable habitat via desktop methods were not field verified due partly to lack of landowner access and an undefined criteria describing some areas “qualitatively assessed as occurring in small or isolated patches” among other screening factors. Note that these species are known to occur in remnant small and isolated patches. The reports lack information on the number of acres omitted from field verification due to these criteria, the specifics of the criteria (e.g. how small the omitted patches were, their distances from other suitable patches), and whether these unchecked areas will be impacted by project activities.

- Among the unknown acreages that were field verified, 1,038 acres on Crowned Ridge I and 174.5 acres on Crowned Ridge II were identified as suitable habitat for these butterflies. Of these suitable acreages, only 12% (127.5 acres) and 23% (40.4 acres) for Crowned Ridge I and II respectively were selected for flight surveys, with larger patch sizes prioritized. It is not clear how the surveyors arrived at these acreages as subsets or the adequacy of this level of effort, but it appears the majority of suitable habitat locations were not surveyed for presence of the species.
- It also appears the flight-period survey areas these butterflies at Crowned Ridge II overlapped with disturbance areas for turbine construction sites, but it is not clear whether the same is true within the Crowned Ridge I survey report. Additionally, the overlap of surveyed suitable habitat with other ground-disturbing activities (e.g. roads, underground lines, crane paths, laydown areas) is not mentioned, thus the extent to which these potential habitats will be impacted is not clear, nor quantified.
- We are not certain whether another year of surveys for these butterflies will occur at either project site (we recommend at least 2 years of surveys), but the reports describe single-year protocols (e.g. three surveys, 48 hours apart, during peak flight period), thus it appears surveys will be limited to 2018. Missing from the single-year protocols in the survey reports is whether buffers to the sites of interest were also surveyed. The protocols include surveying 250 m buffer areas to the site of interest when there are no known populations nearby and 500 m buffers when there are records within 1 km (0.6 mi). The reports do not indicate the presence/absence of observation records in/near the project areas, nor surveys of buffer areas of any size.
- There is also no mention of designated critical habitat for these species in the reports. Critical habitat unit 4 for both the Dakota skipper and Poweshiek skipperling is located approximately one mile from the Crowned Ridge I project boundary. Dakota Skipper critical habitat unit 3/Poweshiek skipperling unit 3A exists only two miles from the project boundary of Crowned Ridge II. The Crowned Ridge projects are located between these two sites. Critical habitat tracts are located close to the projects and suitable habitat is present in the project areas, thus a thorough survey effort is appropriate. Given the above-described issues it is not clear this occurred.

We encourage revision of the reports, and/or addendums to them, to address the above concerns and further explain the methods/rationale so that the risks posed to these listed butterfly species as a result of the Crowned Ridge projects may be better understood and addressed appropriately.

The application materials for these projects describe the potential for impacts to suitable habitat and the possibility these sites will be determined occupied by the species in the future. BMPs proposed for these species are likely helpful, but concerns for impacts remain if the species are present. To preclude the risk of take of these federally listed species, we recommend complete avoidance of suitable habitats which are described in the final listing rule (79 FR 63672-63748, October 24, 2014). If this is not possible, and take of these species may occur as a result of these projects, development of a Habitat Conservation Plan to achieve Endangered Species Act

compliance is available to non-federal entities. See: <https://www.fws.gov/endangered/what-we-do/hcp-overview.html>.

#### Grassland/wetland habitats and wildlife

Regarding grassland/wetland habitats at these project sites, based on our review of revised boundary maps for both Crowned Ridge projects, it appears efforts were made to avoid many of these areas by altering project boundaries; we commend efforts to focus project impacts in previously disturbed areas. However, it appears wildlife habitats are not entirely avoided and the proposed projects will still incur impacts to these sites. The Crowned Ridge I and II project areas are within the Big Sioux Basin and Prairie Coteau Ecoregions within the larger Prairie Pothole Region. The Prairie Coteau in particular, with intact grassland and wetland habitats, harbors high numbers of breeding waterfowl and other migratory birds. These habitats exist within and adjacent to the projects' boundaries. The native grasslands in this part of eastern South Dakota are composed of tallgrass prairie species. A small percentage of the original tallgrass prairie remains intact today and this habitat is considered one of North America's most endangered ecosystems. Our agency has implemented conservation programs targeting this habitat type, and have purchased easements to conserve remaining tracts, help maintain biodiversity, and slow habitat fragmentation in this area. It is a priority conservation habitat for the Service.

Our Madison and Waubay Wetland Management Districts manage the Service's grassland and wetland easements in the counties that would be impacted by the Crowned Ridge I and II projects. While we are aware that NextEra has committed to avoiding direct impacts to the Service's grassland easements, thereby avoiding the associated federal nexus, construction is still proposed on tracts of land that have Service wetland easements. On these easement tracts, the wetland basins are protected by easement restrictions, but adjacent uplands are not. While project development on these tracts will not directly impact these protected basins, indirect impacts affecting wildlife use (see below) of those wetlands will occur due to proximity of project facilities. Similarly, indirect impacts are anticipated on grassland easements if facilities are placed adjacent to these protected tracts of land. Further, facilities for both projects that will be placed on/or adjacent to wetland/grassland habitats that are not protected by easements will incur direct and indirect impacts. We continue to recommend that all project facilities be placed on previously disturbed sites (e.g. croplands) to avoid direct habitat impacts, and encourage situating facilities as far from intact wildlife habitats as possible to reduce indirect impacts.

For those direct and indirect effects that cannot be avoided, we also continue to recommend quantifying and offsetting those impacts. Proposed BMPs submitted for these projects may serve to reduce, but not preclude, impacts. As you know per our prior coordination on this and other NextEra projects, we regard several published literature sources as the best available science regarding avian avoidance of turbines. The U.S. Geological Survey research project funded by NextEra (Shaffer and Buhl 2016) revealed displacement of grassland nesting birds by turbines occurs out to at least 300 m. The Service's own research (Loesch et al. 2013) revealed displacement of breeding waterfowl pairs from wetlands within ½ mile of turbines. Additionally, an independent study of avian species in replanted grasslands (Conservation Reserve Program) (Leddy et al. 1999) also identified grassland nesting bird displacement within 180 m of turbines. Offsetting these impacts is consistent with our March 2012 U.S. Fish and

Wildlife Service Land-Based Wind Energy Guidelines (WEG), developed in coordination with wind industry.

NextEra has committed to development and implementation of habitat offset plans in relation to wind energy facilities in North Dakota; South Dakota harbors similar habitat and wildlife resources and conservation of those resources is important in this state as well. To ensure compliance with the WEG, reduce the environmental impacts of your projects, and help sustain and conserve native South Dakota wildlife species and habitats long-term, we recommend you evaluate the Crowned Ridge projects for any opportunities to further reduce impacts to habitat and wildlife. Then, quantify the remaining direct and indirect impacts to these resources and utilize the aforementioned published studies to develop/implement a plan to offset those impacts. We are willing to work with you in that regard.

Some other items of concern based on our review of NextEra's SDPUC permit application information for the Crowned Ridge projects include the following:

- Grouse Leks Although prairie grouse leks are known to exist in the vicinity of the projects, the only measure currently proposed by NextEra to reduce impacts to these leks is adjustment of the timing of construction (presumably to avoid the lekking season). While this may reduce impacts within the year of construction, it will have no bearing on operational impacts that are likely to displace grouse from leks in subsequent years. Avoiding leks by at least one mile is recommended by South Dakota Game, Fish and Parks; we submit further distance may be needed to preclude displacement.
- Line Marking A significant length (34+ miles) of overhead transmission lines will be constructed with these projects. It is not clear whether line-marking to make lines visible to birds or designs to prevent electrocutions will be applied. We refer you to our earlier letters on these topics and recommend application of the Avian Powerline Interaction Committee's (APLIC) guidelines to reduce the risk of avian mortality at these structures, including eagles (potential violations of the Bald and Golden Eagle Protection Act). Overhead lines in the vicinity of wetlands pose an increased risk to birds. We recommend marking those lines in particular, and ensuring the long-term maintenance of all marking devices and measures used to prevent electrocutions.
- Tallgrass Prairie Crowned Ridge application materials indicate use of Bauman et al. (2016), which identified areas of unbroken prairie in South Dakota. However, while the methods in that publication are described and quantity of unbroken prairie in the project areas are given, it is not clear whether these areas will be avoided – we recommend doing so. As stated above, the tallgrass prairie remaining in South Dakota is a very limited and valuable habitat.

- Bat Surveys Acoustic surveys for bats were conducted for these projects, resulting in detections of several bat species, but no northern long-eared bats. However, based on our review of the survey reports, the survey locations and level of effort appear inadequate to determine whether the northern long-eared bat may occur in the project areas. Each of the six bat species with potential to occur in the project area is associated with forested habitats, yet it appears forested habitats were not surveyed. At Crowned Ridge I, consultant SWCA identified 246 acres of suitable moderate quality habitat (based on patch size between 15-114 acres), but only two sites were surveyed, neither within the identified suitable habitat, and one was outside the project boundary. At Crowned Ridge II, 123 acres of suitable moderate quality (15-114 ac size) habitat were identified, yet only one location was surveyed, and it was not in suitable habitat. It appears all potential habitat patches were consolidated into a single acreage for each Crowned Ridge project, and the values were used to determine the number of bat survey locations. This method is not recommended to evaluate project area use by tree-roosting bat species, as it does not address the nature (small, isolated, scattered patches) of forested habitats in South Dakota and the potential occupancy of those areas by bats. As you know, the 4(d) rule for the northern long-eared bat does not prohibit mortality via collisions with wind turbines. However, if the intent of habitat evaluations and acoustic surveys is to determine the potential presence of this species, the survey methods applied for these projects appear inadequate for that purpose. We recommend targeting suitable habitats for surveys and surveying an increased number of those small, isolated, scattered patches of forest to detect a bat species that prefers trees and does not often utilize open areas.
- Eagles Raptor nest surveys revealed no eagle nests within project boundaries, but six nests were located within the 10-mile buffer surrounding these projects. One nest by the town of South Shore, while not technically within project boundaries, would ultimately be surrounded by turbines if the project area is developed as proposed. Bald eagles were observed during avian use surveys on Crowned Ridge II, but none at Crowned Ridge I. We recommend closely following the Service's *Eagle Conservation Plan Guidance* (<https://www.fws.gov/migratorybirds/pdf/management/eagleconservationplanguidance.pdf>) including implementation of the eagle model used to determine risk and evaluate whether an eagle take permit may be appropriate for these projects.

If changes are made in the project plans or operating criteria, or if additional information becomes available, the Service should be informed so that the above determinations can be reconsidered.

The Service appreciates the opportunity to provide comments. If you have any questions on these comments, please contact Natalie Gates of this office at (605) 224-8693, Extension 227.

Sincerely,

Scott Larson  
Field Supervisor  
North and South Dakota Field Offices

*Cc (email):* Hilary Meyer, SDDGFP, Pierre, SD  
Brad Johnson, USFWS, Waubay, SD  
Natoma Hansen, USFWS, Madison, SD