



United States Department of the Interior



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IN REPLY REFER TO: 2015-TA-0259

Foxtail Wind, LLC
c/o:
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Ms. Brita WoECK:

The U.S. Fish and Wildlife Service (Service) received Tetra Tech's September 18, 2017, letter transmitting updated biological resources reports on behalf of Foxtail Wind, LLC, a wholly-owned subsidiary of NextEra Energy, LLC (Juno Beach, Florida; (Company)). The reports have been prepared for an application to the North Dakota Public Service Commission to obtain a certificate of site compatibility for the proposed Foxtail Wind Energy Center in Dickey County, North Dakota (Project).

The Service reviewed the following (updated July 2017) natural resources reports: 2014 Native Prairie Survey; Dakota Skipper (*Hesperia dacotae*) Habitat Suitability Resurvey; Fall 2014 and Spring 2015 Avian Surveys; and the Final Eagle Report. We offer the following comments under the authority of and in accordance with the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703 *et seq.*), the Endangered Species Act (ESA) (16 U.S.C. 1531 *et seq.*), the Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. 668-668d, 54 Stat. 250), Executive Order (E.O.) 13604 on Improving Performance of Federal Permitting and Review of Infrastructure Projects (June 2012), and the Service's 2012 Land-Based Wind Energy Guidelines (WEG).

The E.O. 13604 specifies that federal permitting and review processes must recognize the critical role project sponsors play in assuring the timely and cost-effective review of projects by providing complete information and analysis. It also directs federal agencies towards two main goals:

- More efficient and effective review of proposed large-scale and complex infrastructure projects, resulting in better projects, improved outcomes for communities, and faster permit decision-making and review timelines, and
- Transparency, predictability, accountability, and continuous improvement of routine infrastructure permitting and reviews.

One recommended action in E.O. 13604 to improve transparency is the early identification of opportunities to integrate intra-and inter-agency mitigation processes to expedite project reviews and encourage large-scale - watershed, regional or landscape-level - mitigation planning, where appropriate and feasible (E.O. 13604, p. 12).

General Comments

During the past 18 months, wind energy industry representatives (including the Company), the North Dakota Game and Fish Department, non-governmental organizations, and the Service's Division of Ecological Services at the North Dakota Field Office have engaged in a voluntary collaborative process to: 1) build a shared understanding of the conservation needs of species of concern in North Dakota and 2) improve the predictability and uncertainty associated with regulatory processes. In particular, the collaborative effort is intended to achieve the outcome of increasing domestic energy production without further diminishing the status of species of concern in North Dakota. This can be achieved by siting and designing wind energy infrastructure that will avoid or ameliorate additional threats to imperiled biomes and the species that rely on these biomes in the State. To accomplish this outcome, participants have focused on establishing a structured approach to establishing common practices for implementing the WEG in North Dakota, by following the five-fold vision of the WEG:

1. Promote compliance with relevant wildlife laws and regulations;
2. Encourage scientifically rigorous survey, monitoring, assessment, and research designs proportionate to the risk to species of concern;
3. Produce potentially comparable data across the Nation;
4. Mitigate, including avoid, minimize, and compensate for potential adverse effects on species of concern and their habitats; and,
5. Improve the ability to predict and resolve effects locally, regionally, and nationally.

The Service does not consider the proposed design of the Project as a case-study example of the envisioned collaborative process mentioned above, because the final Statewide framework has not yet been developed. However, the Company has demonstrated strong support for and investment into this voluntary effort, and the Service is encouraged by the dedicated good-faith effort of the Company to improve the efficacy of the WEG for use on the siting and design of future Projects in North Dakota. The following comments and suggestions are offered to improve the quality of the environmental resource reports and overall implementation of the WEG pursuant to the proposed construction and operation of the Foxtail Wind Energy Center.

2014 Native Prairie Survey (NPS) and 2017 Dakota Skipper Habitat Suitability Resurvey (HSR)

- The Service considers the methods described in Section 2.0 of the NPS to be an appropriate initial step for evaluating the general location of native prairie grasslands in the Project Area. However, there are inherent limitations in using the same methods to discriminate habitat quality at finer scales. For these reasons, a subsequent effort was launched in August 3-4, 2015, to address the uncertainty contained in the findings of the 2014 habitat survey, by collecting more detailed plant community information (reported in

the HSR report). The 2015 habitat surveys (HSR) involved visits to 27 habitat sites and the Service found the reported information an improvement compared to the habitat description in the NPS.

However, the Service noticed the habitat field surveys were conducted at sites that were all subjected to "light grazing" (based upon data contained in the field survey forms). This may simply be a coincidence, but if not, the report should explain the reasoning for restricting the 2015 habitat surveys to lightly-grazed sites. If this was a conscious decision, the conclusion that the Project Area contains 26.0 acres of Dakota skipper and Poweshiek skipperling (*Oarisma poweshiek*) suitable habitat may be underestimated because moderately grazed sites should also be evaluated as potentially suitable habitat for both species. In other words, grazing intensity of both low *and* moderate cattle utilization classes, as classified with the parameters in both the NPS and HSR reports, should be considered within the range of compatibility for the Dakota skipper and Poweshiek skipperling.

- The Service agrees with the stated reference to native prairie grasslands as "one of the most endangered ecosystems in North America" (NPS report, pg. 1). Native prairie grasslands are home to some highly specialized flora and fauna and represents one of the highest conservation priorities of the Service as well as other conservation organizations. Some ESA-listed species that occur in North Dakota are either grassland obligates or depend upon grasslands for the majority of their life cycle (one mammal, two invertebrates, and one plant). Thus, there is a potential for land use decisions that result in grassland loss or modification to affect species other than birds.

Over fourteen thousand acres of native prairie is reported to occur in the Project Area (78 percent of the Project Area evaluated). In regards to differentiating between permanent and temporary as well as direct and indirect effects of the Project, the Service recommends the report be revised to address habitat loss and degradation, habitat fragmentation, displacement and behavioral changes, and indirect effects pursuant to the WEG (Tier 3, pp. 25-26).

Based on the depicted extent and location of native prairie grasslands and the overlay of the proposed locations turbine locations (Figure 2, NSP report; Figure 1, HSR report), the Service expects the Foxtail Wind Energy Center, as proposed, will result in the permanent loss and fragmentation of native prairie grasslands. It is our understanding that the current layout of the turbines is final, thus approximately 31 percent (24 of 75) of the turbines proposed for construction will be located in native prairie grassland tracts with no history of tillage. Additional impacts to grasslands are expected from the associated roads and infrastructure, although the locations of these features are not discussed in detail nor are they depicted in the report figures. Neither the NSP nor HSR reports contain estimates and descriptions of the expected loss of grasslands due to the Project infrastructure (above and below ground) and operation. However, the Service considers this information one of the most important outcomes of the WEG Tier 3 evaluations as it would inform the planning and implementation of any voluntary mitigation referenced in the WEG.

The Service therefore recommends these reports be updated to describe the anticipated direct and indirect effects of Project infrastructure and operations with reference to 1) untilled native soils; 2) native prairie grassland communities; and 3) endemic (obligate) fauna. As one example, the Company could improve the quality of the environmental risk assessment for the Project by evaluating fragmentation effects as measured by a changes in the number of native (untilled) prairie habitat patches, patch edge-to-interior ratio, mean distance between patches (isolation factors), or mean patch size of native prairie grasslands and/or soils (or other similar metrics). Because behavioral and displacement responses to fragmentation varies among species and individuals within a species, a spatial study of the fragmentation effects may be one of the best ways to evaluate the more subtle degradation in the function of the native prairie system due to any unavoidable construction and operational impacts.

2015 Final Eagle Report

- The Service found the Eagle Report to be succinctly written and informative. The findings concluded that the risk for the incidental take of bald eagles (*Haliaeetus leucocephalis*) was low (3 bald eagles observed during a total of 480 hrs of monitoring within the Project Area). No golden eagles (*Aquila chrysaetos*) were observed. Surprisingly, 43 bald eagles were observed during the March 2015 aerial raptor nest survey. The difference in observations is likely to due to greater area of coverage per unit of time afforded by the aircraft and a larger survey area (a 10-mi buffer around the Project Area was established for the raptor nest survey area). Nonetheless, the Service infers the eagle use of the Project Area may be higher than what was observed and calculated (0.77 eagle use minutes) based upon the reported observations from aerial raptor nest survey. The Service agrees that the data currently suggest a low exposure risk for bald and golden eagle interaction with the Project.

Fall 2014 and Spring 2015 Avian Survey Report (Avian Report)

- The executive summary (p. 2) and Section 4 (Discussion, p. 17) contain the statement "...the greatest potential impact of wind facilities to avian species is collisions with turbines rather than disturbance or displacement." The Service found no scientific information cited or reported that supports this statement. The Service recommends this statement be deleted or clarified and supported with supporting information. In addition, the Service recommends the Avian Report be updated to address all effects, including the effects of disturbance and displacement, thereby not limiting the analysis to those effects with the greatest potential to impact avian species as stated in the report. Adding this analysis and discussion will result in better alignment with the goals and purposes of the WEG Tier 3 studies.
- The Service agrees that migration surveys (Section 1.2, p. 2) can be useful to estimate bird use of an area when applying the methods described by Reynolds et al. (1980) and recommended in the WEG (p. 28). However, the Service believes establishing 800 m (0.5 mi) radius survey areas (equivalent to 503 ac or 201 ha survey areas) to detect the presence of grassland songbirds, as done for the Project, likely resulted in a high rate of non-detection for a number of avian species. This would be true regardless of the number of visits to a given survey point. A biologist's ability to detect birds diminishes as the distance increases

(generally detection is significantly reduced beyond 75 to 100 m) because the surveyor simply becomes less capable to detect visual and acoustic cues from flying or vocalizing (perched) breeding birds, especially songbirds. Therefore, the Service expects the effective survey area associated with the avian point counts varies depending upon the reference or target species. For grassland songbirds, the effective survey area was likely much less than the 503 ac (201 ha) suggested in the Avian Report. However, other easier to detect species such as waterfowl and raptors likely had greater effective survey area. Any individual birds or species that were undetected would contribute to causing an underestimate in the findings of the observational data in regards to species abundance or the number of species in the Project Area. This potential source of observer bias should be discussed and, if possible, be accounted for in the frequency data presented in the Avian Report.

- The executive summary and Section 4 (Discussion, p. 17) indicate the Project will have low likelihood of population level effects. However, the Service found no estimates of the predicted number of avian mortalities induced by the Project (by species, per year and overall during the life of the Project). Detecting and/or describing population level effects, should they occur, generally requires an explicit analysis of the spatial scale, time scale, species, population trends, population stressors, local and regional habitat conditions/carrying capacity, source/sink dynamics, and/or intra- or interspecific competition. The Avian Report contained a brief discussion (pp. 17-19) on the most abundant species detected during the spring and fall surveys as well as selected fatality rates for some species reported at other operating projects. However, species of conservation concern, such as those designated in North Dakota and reported in the 2015 North Dakota State Wildlife Action Plan (Dyke et al. 2015; State Plan), were never mentioned in the Discussion (Section 4) of the Avian Report.

For example, the grasshopper sparrow (*Ammodramus savannarum*), detected in the Project Area during both the Fall 2014 and Spring 2015 surveys, is a Level 1 species of conservation priority identified in the State Plan (significant declines in Statewide abundance due primarily to grassland conversion to other land uses, State Plan, p. 192). However, the Avian Report contained no information or analysis addressing the potential for direct or indirect effects to this species. This is an important omission in the Avian Report as it stands to reason that if the Project induces either a low fatality rate or causes individual grasshopper sparrows to avoid a large extent of the species' suitable breeding habitat, a negative local, meta-population effect could occur. If the species was not able to habituate to the Project disturbance effects, the loss of breeding habitat could persist for the life of the Project (25 to 30 years).

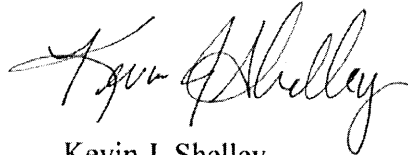
Hypothetically, when a species is already suppressed by landscape stressors, even small changes in abundance or breeding success can cause biologically measurable local population-level effects in avian populations as the biological interaction of multiple stressors can cause synergistic effects (Taylor et al. 2013). The intent of the WEG Tier 3 evaluations is to attempt to identify such concerns before a project is permitted and constructed. There were additional avian species of conservation priority (Dyke et al. 2015) detected in the Project Area (Avian Report; Tables 4a and 4b) that should be similarly evaluated for the potential to be negatively impacted by the Project.

- The Service recommends the Avian Report be updated to include the expected (total and number for each species) fatalities that would be expected based upon the reported survey information in the Project Area for each species. For example, the Avian Report (p. 17) presented the avian fatality rate in the northern Great Plains of 0.81 – 5.59 birds/MW/yr (Erickson et al. 2014). Based on these rates (Erickson et al. 2104), a 150 MW project can be expected to kill between 3,645 to 25,155 birds during a 30-yr operating period. If the Company considers this rate range applicable to the Project as suggested (Avian Report, p. 17), the Service recommends developing spatially explicit fatality projections and associated (potential) habitat avoidance areas for sensitive avian species based on the spatial extent of the occurrence data within the Project Area from the fall 2014 and spring 2015 surveys. This would readily inform the risk profile of individual turbines (based upon the current siting plan), placement of infrastructure, Tier 4 and 5 studies, and the post-construction monitoring plan.

In summary, the Service infers that Project will result in the permanent loss and fragmentation of native prairie grasslands and soils. In addition, we have recommended several important topics in need of clarification and further analysis. If addressed, we believe the environmental resource reports for the proposed Foxtail Wind Energy Center will have a much improved scientific foundation upon which to base any conclusion. The Service believes addressing these items will also provide greater transparency for the public and other stakeholders in regards to the Company's voluntary adoption of the WEG. We therefore remain fully committed to working with the Company towards improving the environmental effects analyses.

We appreciate your efforts to ensure species of conservation concern, including listed and proposed species, are considered as part of your project planning. For further information, please feel free to contact me directly at (701) 355-8512 or at the letterhead address.

Sincerely,



Kevin J. Shelley
Supervisor
North Dakota Field Office

cc: Terry Steinwand, Director, North Dakota Game and Fish Department
Randy Christmann, Chairman, North Dakota Public Service Commission
Scott Larson, Project Leader, ND/SD Field Office

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