Burke Wind, LLC
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March 29, 2019

Mr. Steve Kahl
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**RE: Burke Wind, LLC**
**Burke County Wind Energy Center**
**PU-18-344**
**Late Filed Exhibit No. 51**

**VIA Hand Delivery and Email**

Dear Mr. Kahl,

The purpose of this Late Filed Exhibit (LFE) for the Burke County Wind Project (Case No. PU-18-344) is to address materials provided by The North Dakota Chapter of The Wildlife Society and the Coteau Prairie Alliance (CPA) at the hearing on March 8, 2019 as provided by Karen Smith (referred to herein as the "CPA presentation") (Docket No. 116). We have carefully reviewed the CPA presentation and conclude there is no materially new information provided that Burke Wind has not previously addressed through filings in our docket or through the direct testimony of Mr. Clayton Derby of Western Ecosystems Technology, Inc. (WEST) and Dr. Kimberly Wells of NextEra Energy at the hearing on March 8, 2019.

Much of the information in the CPA presentation relates to the larger Coteau region or to prior studies on the Lostwood National Wildlife Refuge, as opposed to undertaking site-specific studies of the Burke County Wind Project site. A site-specific analysis is the scale and type of data recommended for Tier 3 pre-construction studies as recommended by the U.S. Fish and Wildlife Service's (USFWS) Voluntary Land-Based Wind Energy Guidelines (WEGs) for the last stage of project development prior to construction. We also notice much of the CPA presentation references the *Draft Wildlife Guidelines* issued by the North Dakota Department of Game and Fish (NDGFD) in April 2018; however, these draft guidelines were never finalized and were subsequently withdrawn in June 2018. In this letter, we address key themes raised and reference supporting portions of our docket and direct testimony that previously addressed each theme.

*Critical Habitat (pg. 3)*

On page 3 of the CPA presentation, CPA uses the term "critical habitat" to reference a large geological feature in North Dakota. It appears CPA is attempting to use this term to reference the Commission's exclusion criteria in North Dakota Administrative Code § 69-06-08-01(1) and (2) as "areas critical to the life stages of threatened or endangered animal or plant species". This interpretation is not an appropriate use of this term , as "critical habitat" is formally defined under U.S.C. Section 1532 5(A) of the federal Endangered Species Act (ESA) for a species that is threatened or endangered as "the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of section 1533 of this title, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection". According to the NDGFD, the state does not have a state ESA and instead relies on the federal ESA (NDGFD 2016).

The CPA's presentation and interpretation of critical habitat is misguided. It is inconsistent with the term as used under the federal ESA and with the Commission's defined exclusion areas criteria. Burke Wind has avoided Commission defined exclusion areas and sited the project in accordance with its siting approach for all of its operating facilities in North Dakota. This approach is consistent with past siting precedent and North Dakota law. Any change in siting criteria policy as may be suggested by CPA must be subject to a formal rule making process with opportunity for public comment.

*Sharp-Tailed Grouse (page 3)*

On page 3 of the CPA presentation, CPA references the *Draft Wildlife Guidelines* released and then withdrawn by the NDGFD in 2018 and non-public data housed at Lostwood National Wildlife Refuge as indicating approximately one-third of the global sharp-tailed grouse population resides in the state of North Dakota. As CPA notes, sharp-tailed grouse are currently a valuable hunted species and a priority conservation species for the NDGFD. Burke Wind recognizes the importance of this species to both citizens of North Dakota as a hunting resource and to the NDGFD as a species of conservation priority, which is why we coordinated development of our survey protocols with NDGFD staff (see Appendix C of the Application submitted in September 2018), buffered all known leks by a 0.5-mile buffer (see Section 7.15.2 of the Application submitted in September 2018), and have provided a voluntary offset package to the NDGFD and the USFWS to address potential impacts to grassland bird species.

A secondary point the CPA presentation addressed was adequacy of surveys. As referenced above and testified by Dr. Wells at the hearing, Burke Wind coordinated survey protocol development with the NDGFD including a query of any known lek data. As described in the Grouse Lek and Raptor Nest Memo filed with the Commission in September 2018, Burke Wind proposed a combined ground- and aerial-based lek survey protocol to the NDGFD, who indicated they did not have a specific survey protocol and did not provide any specific procedural changes or suggestions (see page 2 of the Grouse Lek and Raptor Nest Memo, Docket No. 86). As a result, Burke Wind deemed the survey protocols appropriate and proceeded.

*Indirect Impacts on Grassland Birds (pages 5 and 7)*

On page 5 of the CPA presentation, CPA references a study by Shaffer and Buhl in 2016 and speculates sound from turbines could be resulting in displacement of birds or behavioral avoidance and considered an indirect impact. Burke Wind notes that the referenced study did not measure or assess any metrics associated with turbine sound. As Dr. Wells testified, Burke Wind believes there is evidence that grassland birds could be affected by indirect impacts; however, that evidence is mixed across studies in the collective scientific literature compared to the literature on direct impacts. As our Amended Application describes and Dr. Wells and Mr. Derby testified, Burke Wind has avoided and minimized our impacts as much as possible, and mitigated remaining impacts through our proposed voluntary offset package.

Although there is substantial research on the potential impacts of various kinds of anthropogenic disturbance, including oil and gas, highways, and tall structures (transmission lines, wind turbines, communication towers) as reviewed in Bartuszevige and Daniels 2016, Becker et al. 2009, Braun et al. 2002, Connelly et al. 2004, and Elmore and Dahlgren 2016, Utah Wildlife in Need 2010, scientific evidence for the effects of wind turbines in particular on grouse and prairie chickens is mixed and characterized by high uncertainty particularly when extrapolated from studies that did not explicitly study wind impacts (Hagen et al. 2004, Johnson and Young 2014, LeBeau et al. 2014, McNew et al. 2014, Nonne et al. 2013, Vodehnal et al. 2011, Walters et al. 2014, Westover et al. 2016 ). In addition, much of the scientific literature reports that other confounding factors from disturbances unrelated to wind development—such as highways, noise, and vegetation—may be affecting grouse use. Further, the detection of leks within much closer distances to turbines than buffers recommended indicate there is not strong support for assertions that sage grouse and prairie chickens avoid wind turbines. In addition, as Mr. Derby testified, behavioral displacement studies such as the Shaffer and Buhl study from 2016 do not establish what happens if and when birds move away. As a result, it is unknown whether these species move to adjacent areas or have potential demographic impacts on reproduction or survival as a result.

CPA also raised a concern about the issue of roads and their potential fragmenting impact on page 7 of the CPA presentation. However, CPA does not appear to address the existing fragmentation created by roads from many different sources including rural residential development, commercial development, farming, and oil and gas activity in the area. Our site-specific data described in our Amended Application filed in November 2018 (see Table 7-2) documents an existing mix of fragmentation in the project area due to oil and gas activity, existing roads, and agriculture. Although herbaceous land cover is present, our conservative native prairie analysis following the recommendations of the NDGFD and the USFWS indicates only 21% of the project area is considered unbroken grassland and only 5.8 acres of unbroken prairie are expected to be permanently impacted (see the Grassland Analysis memo dated January 2019, Docket No. 71). In contrast, broken prairie and cropland comprise 18% and 31%, respectively, of the project area.

Burke Wind previously considered fragmentation impacts and has avoided, minimized, and mitigated potential impacts. For example, Burke Wind removed 55 turbines from native prairie on the original 300MW project design. Burke Wind further reduced the project from 300MW to 200MW, moving farther away from Lostwood National Wildlife Refuge, such that the closest turbine went from 1.29 miles away from the refuge to 7.36 miles away. We have also provided NDGFD and the USFWS with a voluntary offset package that mitigates any remaining impacts.

*Wetland Impacts, Waterbirds, and Waterfowl (page 10)*

On page 10 of the CPA presentation, CPA references the prairie pothole region of the United States and North Dakota's contribution to waterfowl production. Burke Wind was also concerned about this, which is why we sited our approach to avoid all impacts to wetlands that are regulated by the U.S. Army Corps of Engineers and all non-jurisdictional wetlands determined to provide potentially suitable stopover habitat for the federally listed Whooping Crane, as Dr. Wells testified. We also coordinated our wildlife studies with both the NDGFD and the USFWS to address known resources. Finally, we provided a voluntary offset package to address indirect impacts to wetlands to address any residual impacts on waterbirds or waterfowl as recommended by the NDGFD and USFWS.

*Migratory Corridor (pages 12-13)*

On pages 12 to 13 of the CPA presentation, CPA raises concern about the Coteau being a valuable migratory corridor for many birds such as the federally listed Whooping Crane and includes the Neimuth et al. 2018 paper. Burke Wind used information provided by the NDGFD and the USFWS in early project stages that included radiotelemetry data of Whooping Crane locations from the USFWS that showed the project location was in the low-use intensity area (see Figure 17 of the Amended Application filed in November 2018). Review of the more recent Neimuth et al. 2018 paper and our Whooping Crane Habitat Suitability Analysis indicates the project site is no more attractive than the surrounding area and suggests no reason to believe the site would be an attractant. In addition as Mr. Derby testified, no Whooping Crane or Sandhill Crane (a non federally listed species) has ever been injured or killed by collision with wind turbines in the migratory corridor and data that he and his firm (WEST) have submitted for publication shows Whooping Cranes avoid turbines. Burke Wind avoided all impacts to potentially suitable stopover habitat regardless of jurisdictional status, committed to marking the entire transmission line to reduce the potential for collisions, and designed the project following the Avian Power Line Committee (APLIC) Suggested Practices to further reduce the risk of collision or mortality.

*Wind Energy Guidelines (page 22)*

On page 22 of the CPA presentation, CPA references the USFWS Voluntary Land-Based WEGs and concludes Burke Wind did not follow the WEGs and should have abandoned the site. As Dr. Wells testified, Burke Wind followed the WEGs and concluded additional site-specific information was warranted and proceeded to gather that information in Tier 3 of the pre-construction studies. We believe the CPA interpretation of the WEGs is inconsistent with what the guidance document actually

describes. Specifically, in Figure 1 of the WEGs, each of the three pre-construction study tiers has multiple outcomes, including gathering additional site-specific data and/or the potential to mitigate any impacts. As the USFWS and NDGFD have recommended, Burke Wind avoided, minimized, and mitigated our impacts as described in our Amended Application and direct testimony. With the provision of our voluntary offset package, we believe we have appropriate mitigated any remaining impacts consistent with the Commission's requirements.

*Wind Site Selection (pages 16 to 22)*

On pages 16 to 22 of the CPA presentation, CPA introduces a paper authored by The Nature Conservancy and a tool and paper authorized by the World Wildlife Federation (Plowprint) as models for selecting low impact wind sites. CPA's premise appears to be, but is not stated explicitly, is that certain areas of the state of North Dakota should be excluded from wind development. Although NDGFD initially took a similar approach to classifying assessed risk of areas of the state for wind development in their Draft Wildlife Guidelines released in April 2018, NDGFD ultimately withdrew that same guidance document in June 2018. If the Commission desires to make portions of the state exclusion areas for wind development, Burke Wind believes a formal rule making process is the appropriate channel for considering any such policy decisions that have the potential to affect a large number of stakeholders including private landowners, utilities, the agricultural community, and conservation interests.

CPA also references and includes the Fargione et al. 2012 paper as an example of how wind companies should select low risk sites. The Fargione paper is a coarse scale approach using desktop data that represents primarily environmental constraints that are one of many factors involved in siting a wind project. Although the paper attempts to address other aspects of wind siting such as proximity to transmission and wind resources, it does not adequately capture the true decision-making process used to select wind sites that must address customer need, proximity to transmission and loading at the proposed point of injection on the grid, willing landowners and available land, and minimizing potential environmental constraints and impacts. Although potentially useful at very early stages of project planning (Tier 1 of the WEGs) in conjunction with other lines of evidence, desktop only tools lack the sophistication and utility to be the sole source of determining the overall risk of any site for wind development.

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