

**STATE OF NORTH DAKOTA  
PUBLIC SERVICE COMMISSION**

**Burke Wind, LLC  
Burke County Wind Energy Center  
Burke County  
Siting Application**

**Case No. PU-18-344**

**[PROPOSED] FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER**

**April \_\_, 2019**

**Appearances**

Commissioners Julie Fedorchak and Brian Kroshus.

Casey A. Furey and Wade C. Mann, Attorneys at Law, Crowley Fleck PLLP, 100 West Broadway, Suite 250, Bismarck North Dakota 58502 on behalf of the Applicant, Burke Wind, LLC.

Brian Schmidt, Attorney at Law, Smith Porsborb Schweigert Armstrong Moldenhauer & Smith, 122 E. Broadway Ave., Bismarck, North Dakota 58502, Special Assistant Attorney General on behalf of the North Dakota Public Service Commission.

Timothy Dawson, Administrative Law Judge, Office of Administrative Hearings, P.O. Box 1695, Bismarck, North Dakota 58502, as Procedural Hearing Officer.

**Preliminary Statement**

On September 14, 2018, Burke Wind, LLC (“Burke Wind”) filed an Application for a Certificate of Site Compatibility for a 300 megawatt (“MW”) wind energy conversion facility known as the Burke County Wind Energy Center, to be located in Burke County, North Dakota, docketed as Case No. PU-18-344.

On November 14, 2018, Burke Wind filed an Amended Application for a Certificate of Site Compatibility (“Application”) for a 200 MW wind energy conversion facility known as the Burke County Wind Energy Center (“Project”), to be located in Burke County, North Dakota, docketed in Case No. PU-18-344.

On August 9, 2018, Burke Wind also filed a Consolidated Application for a Certificate of Corridor Compatibility and Route Permit concerning a 37-mile long 345 kilovolt (“kV”) electric transmission line and associated facilities to be located in Burke and Mountrail Counties, North Dakota, docketed as Case No. PU-18-302.

On January 23, 2019, the North Dakota Public Service Commission (“Commission”) consolidated Case Nos. PU-18-344 and PU-18-302 for public hearing under North Dakota Case No. PU-18-344

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Administrative Code § 69-02-04-04, and deemed the Application complete conditioned upon filing thirty days prior to the public hearing: 1) Maps showing final site plan with turbines, access roads, collector lines, transmission line structures and all residential receptor points labeled 2) Class II and Class III cultural resource survey reports or summaries showing areas surveyed and SHPO cultural site numbers recommended for avoidance; and 3) Wetland delineation reports.

Also on January 23, 2019, the Commission issued a Notice of Filings and Consolidated Hearing, and scheduled a public hearing for March 8, 2019 at 9:00 a.m. CST, at Memorial Hall, 100 Main Street NW Bowbells, ND 58721.

The Notice of Filings and Consolidated Hearing identified the following issues to be considered for the Application in PU-18-344:

1. Will the location and operation of the proposed facilities produce minimal adverse effects on the environment and upon the welfare of the citizens of North Dakota?
2. Are the proposed facilities compatible with the environmental preservation and the efficient use of resources?
3. Will the proposed facility locations minimize adverse human and environmental impact while ensuring continuing system reliability and integrity and ensuring that energy needs are met and fulfilled in an orderly and timely fashion?

On February 6, 2019, with respect to the Project, Burke Wind filed a final site plan, Class II and Class III cultural resource summaries, a wetland delineation and determination report, updated acoustic and shadow flicker analyses, and updated environmental and wildlife summaries.

On March 8, 2019, the public hearing was held as scheduled.

Having allowed all interested persons an opportunity to be heard, and having heard, reviewed, and considered all testimony and evidence presented, the Commission makes the following:

### **Findings of Fact**

1. Burke Wind, LLC is a Delaware limited liability company and is a wholly owned, indirect subsidiary of NextEra Energy Resources, LLC.
2. Burke Wind is authorized to transact business in the State of North Dakota, as evidenced by the corporate papers filed with the Commission in Case No. PU-18-303.
3. The Project will be owned and operated by Burke Wind.

## Size, Type and Preferred Location of Facility

4. The Project will consist of a wind energy conversion facility within a Project area of approximately 22,933 acres of land, as depicted in Exhibit 35 (“Project Area”), in Burke County, North Dakota. The Project will consist of up to 76 wind turbines and have a nameplate capacity of up to 200 MW.
5. Burke Wind expects to use both General Electric (“GE”) 2.72 MW and 1.715 MW wind turbine generators. The GE 2.72 MW wind turbines will have a 295-foot hub height and measure 485.5 feet from the base of the tower to the tip of the upright blade. The GE 1.715 MW wind turbines will have a 262-foot hub height and will measure 431.5 feet from the base of the tower to the tip of the upright blade. The portion of the foundation that is above ground will be 16 to 18 feet wide at the base of the tower. Each turbine will be grounded and shielded to prevent against lightning strike.
6. The power from the wind turbines will be run through an underground 34.5 kV collection system. The collection system will terminate at the collector substations where the voltage will be stepped up from 34.5 kV to transmission line voltages for interconnection to the transmission grid.
7. The wind turbines will have Supervisory Control and Data Acquisition (“SCADA”) communications technology to allow control and monitoring of the wind facility. The SCADA communications systems permits automatic, independent operation and remote supervision allowing simultaneous control of turbines.
8. Additional facilities associated with the Project include access roads, underground electrical collection systems, a collection substation, an operation and maintenance building, and meteorological evaluation towers.
9. The Project will be constructed pursuant to National Electrical Safety Code requirements.
10. An Aircraft Detection Lighting System will be installed in compliance with Federal Aviation Administration requirements and North Dakota Century Code § 49-22-16.4.
11. Burke Wind has signed a 30-year power purchase agreement with Basin Electric Power Cooperative for the full output of energy produced by the Project.
12. All easement agreements and options necessary for the siting and construction of the Project and associated facilities have been obtained.
13. Burke Wind intends a December 2019 in-service date for the Project.

## Study of Preferred Location

14. Burke Wind coordinated with and received feedback from the following federal and state departments, agencies, and entities:
  - a. Federal: United States Army Corps of Engineers (“USACE”); U.S. Fish and Wildlife Service (“USFWS”); and U.S. Federal Aviation Administration.
  - b. State: North Dakota Geological Survey; North Dakota Department of Health; North Dakota Game and Fish Department (“NDGFD”); North Dakota Department of Trust Lands; North Dakota State Water Commission; North Dakota Industrial Commission; and, State Historical Society of North Dakota.
15. Agency consultations and comments are noted in the Application, exhibits, and testimony presented at the public hearing. Burke Wind has avoided, minimized, and mitigated impacts for all issues raised by state or federal agencies.
16. Burke Wind performed a desktop evaluation on the Project Area for soils, land use, wetlands and waterbodies, trees and shrubs, and protected species and critical habitats.
17. Burke Wind conducted a Class I Literature Search of the Project Area to identify previously recorded archaeological sites identified during previous surveys, and historic architecture within the Project Area and a two-mile study area surrounding the Project Area.
18. Burke Wind conducted a Class II Architectural Survey of the Project Area and submitted the report to the State Historic Preservation Office (“SHPO”). Burke Wind filed a copy of the SHPO’s concurrence letter with the Commission (Exhibit 15, Docket No. 79) indicating a no significant sites affected determination.
19. Burke Wind conducted a Class III Cultural Resource Inventory for archaeological resources and submitted the report to SHPO. Burke Wind filed a copy of the SHPO’s concurrence letter with the Commission (Exhibit 17, Docket No. 81) indicating a no significant sites affected determination.
20. Burke Wind undertook a voluntary outreach and consultation with Native American Tribes to address potential cultural concerns and avoid potential impacts to resources of tribal or cultural significance.
21. Burke Wind conducted natural resource field surveys within the Project Area. The field surveys gathered information on soils, land use and vegetation, wetlands and waterbodies, trees and shrubs, and wildlife, including protected species and critical habitats.
22. Burke Wind conducted large bird point count surveys, grassland breeding bird surveys, grouse lek aerial surveys, aerial and ground-based raptor nest surveys, a bat habitat study, a grasslands analysis, and an analysis of potential whooping crane habitat in the area of the Project. A single flock of three whooping cranes were observed flying over the site above the rotor swept zone in April 2017; however, these three birds were never observed using habitat on

the ground within the Project or air space within the rotor swept zone or the zone of risk. No other federally endangered, threatened, or candidate species were recorded using habitat on the ground within the Project, and no significant impacts to wildlife are anticipated because Burke Wind has avoided, minimized, and mitigated all potential impacts.

### Siting Criteria

23. The Commission has established criteria pursuant to North Dakota Century Code § 49-22-05.1 to guide the Commission in evaluating the suitability of granting a Certificate of Site Compatibility. The criteria, as set forth in North Dakota Administrative Code § 69-06-08-01 are classified as Exclusion Areas, Avoidance Areas, Selection Criteria, and Policy Criteria.

24. Burke Wind evaluated the Project with respect to the Exclusion, Avoidance, Selection, and Policy Criteria of the Commission.

25. With the exception of prime and unique farmland, an energy conversion facility must not be sited within an Exclusion Area.

26. If the Commission finds that the prime and unique farmland that will be removed from use for the life of a facility is of such small acreage as to be of negligible impact on agricultural production, then the Exclusion Area shall not apply.

27. Prime farmland is not located within the Project Area. Farmland of statewide importance has been avoided to the extent practical. Permanent impacts to farmland statewide importance are less than one percent of the total Project Area. The Commission finds that the amount of farmland of statewide importance that may be disturbed by the Project is of such small acreage to be of negligible impact on agricultural production.

28. With respect to Exclusion Areas, designated and registered archaeological and historical sites are located within the Project Area however, Burke Wind has sited the Project to avoid impacts to these sites.

29. No additional Exclusion Areas are located within the Project Area.

30. An energy conversion facility must not be sited within an Avoidance Area unless the applicant shows that, under the circumstances, there is no reasonable alternative. In determining whether an Avoidance Area should be designated for a facility, the Commission may consider, among other things, the proposed management of adverse impacts, the orderly siting of facilities, system reliability and integrity, the efficient use of resources, and alternative sites.

31. With respect to Avoidance Areas, historical resources are present within the Project Area; however, Burke Wind has sited the Project to avoid impacts to historical resources.

32. Wetlands are designated as an Avoidance Area. Wetland delineations were completed on all aspects of the Project (Exhibits 31, 32, and 33, Docket Nos. 92, 93, and 94, respectively).

Fifteen USACE jurisdictional wetlands were delineated within the Project Area. No USACE jurisdictional wetlands will be temporarily or permanently impacted by the Project.

33. Burke Wind has avoided temporary and permanent impacts to isolated prairie potholes to the maximum extent practicable. The Project will permanently impact one acre of isolated prairie potholes. All isolated prairie potholes determined suitable stopover habitat for whooping cranes were completely avoided.

34. Trees and shrubs are sparsely located within the Project Area. The Project has not been sited in woodlands and impacts to trees will be avoided to the extent practicable. Tree or shrub removal and replacement will be coordinated with landowners and conducted in accordance with the Commission's Tree and Shrub Mitigation Specifications (Exhibit 6, Docket No. 70).

35. Burke Wind conducted an acoustic analysis to assess whether sound levels from the Project will exceed 50 decibels within 100 feet of an inhabited residence or community building pursuant to N.D. Admin. Code § 69-06-08-01(4) (Exhibits 8, 9, and 10, Docket Nos. 72, 73, and 74, respectively). The Project meets the Commission's sound level requirement at all currently inhabited residences or community buildings.

36. The Project is also governed by the Burke County Zoning Regulations Section 11, Article 11, Part J with respect to sound. The Burke County sound regulation equates to 49 decibels within 50 feet of an occupied structure. Burke Wind has obtained a Conditional Use Permit from Burke County for the Project (Exhibit 38, Docket No. 97).

37. No additional Avoidance Areas are located within the Project Area.

38. Burke Wind submitted evidence that the proposed Project will not have a significant adverse impact on the Selection Criteria set forth in North Dakota Administrative Code § 69-06-08-01(5). Burke Wind committed to maximizing the benefits of the Project so far as possible to meet the Policy Criteria set forth in North Dakota Administrative Code § 69-06-08-01(6).

39. A shadow flicker analysis was conducted for the Project on existing residences, using realistic modeling assumptions (Exhibits 8, 11, and 12, Docket Nos. 72, 75, and 76, respectively). Based on the shadow flicker analysis, potential shadow flicker levels are expected to be below 30 hours per year at all participating and non-participating residences.

40. The Project and associated facilities are expected to result in permanent disturbance and occupation of up to 65.7 acres of land. No landowners will be displaced. Burke Wind will continue to work with landowners to minimize land use disruptions from the Project. No impacts to irrigation or quality of agricultural land are anticipated.

41. During construction, the Project may result in a temporary increase in traffic on county and township roads. The increase in traffic during construction is not expected to be at a volume that will disrupt residents or travel in the Project Area. During operation, no adverse effects to transportation facilities or networks are anticipated.

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42. No significant adverse impacts are foreseen to community services. The Project is expected to be of economic benefit to the affected area through the creation of construction, operation and maintenance jobs, easements payments to landowners, state and local tax revenue, and local expenditures.

43. No impacts to any radio signals, television signals, satellite or phone signals, GPS signals, air defense radar, homeland security radar, or other weather surveillance radar are anticipated.

#### Measures to Minimize Impacts

44. Burke Wind has agreed to certain steps to mitigate the impact of the Project as indicated in the February 27, 2019 Certification Relating to Order Provisions with accompanying Tree and Shrub Mitigation Specifications, which has been filed with the Commission (Exhibit 6, Docket No. 70).

45. Burke Wind will utilize best management practices to minimize impacts on ground and surface water, and to prevent soil erosion. Erosion control measures required under the National Pollution Discharge Elimination System permit and the associated Stormwater Pollution Prevention Plan will be implemented. Construction of the Project is not anticipated to have a significant adverse impact on surface or ground water resources or soils. Temporarily disturbed areas will be restored and reseeded.

46. Burke Wind has applied a turbine setback of 1,400 feet from inhabited participating residences and has applied a turbine setback of 1,457 feet from currently existing inhabited residences of all non-participating landowners. The distance from a turbine to the nearest non-participating residence is 2,734 feet.

47. During construction, road speed within the Project will be limited to 25 miles per hour to minimize wildlife collisions.

48. The closest wind turbine has been sited at least 7.36 miles from Lostwood Wildlife Refuge.

49. Burke Wind will avoid temporary and permanent impacts to field-verified suitable Dakota skipper habitat.

50. Burke Wind has adopted siting buffers around known raptor nests and grouse leks to minimize disturbance.

51. Burke Wind has coordinated and consulted with the NDGFD and USFWS regarding avoidance, minimization, and mitigation related to habitat and wildlife.

52. Burke Wind has avoided all USFWS grassland easements and protected wetland basins within USFWS wetland easements.
53. Burke Wind has minimized permanent impacts to unbroken native prairie to 5.8 acres or less than one percent of the Project Area.
54. Burke Wind has offered a voluntary mitigation package to NDGFD for remaining residual impacts to native prairie (Exhibits 46 and 47, Docket Nos. 105 and 106, respectively).
55. Burke Wind has developed a voluntary Wildlife Conservation Strategy for documenting avoidance and minimization measures.
56. Burke Wind will follow Avian Power Line Interaction Committee suggested practices to avoid and minimize the potential for avian collisions, and will bury electric collection lines and use unguyed permanent meteorological evaluation towers or install bird diverters.
57. Throughout operations, Burke Wind will implement a voluntary Whooping Crane Identification Training and Curtailment Procedure to shut down turbines if whooping cranes are observed within one mile of a turbine.
58. Burke Wind will complete one-year of post-construction mortality monitoring for birds and bats.
59. Burke Wind will file a decommissioning plan and decommissioning financial assurance in compliance with North Dakota Administrative Code Chapter 69-09-09.
60. Burke Wind will participate in North Dakota One-Call Excavation Notice System.

From the foregoing Findings of Fact, the Commission makes the following:

### **Conclusions of Law**

1. The Commission has jurisdiction over Burke Wind and the subject matter of the Application under North Dakota Century Code Chapter 49-22.
2. Burke Wind is a utility as defined in North Dakota Century Code § 49-22-03(14).
3. The wind energy conversion facility proposed by Burke Wind is an electric energy conversion facility as defined in North Dakota Century Code § 49-22-03(5).
4. The Application submitted by Burke Wind meets the site evaluation criteria required by North Dakota Century Code Chapter 49-22.

5. The location, construction, and operation of the Project will produce minimal adverse effects on the environment and upon the welfare of the citizens of North Dakota.
6. The Project will minimize adverse human and environmental impact, while ensuring continuing system reliability and integrity, and ensuring that energy needs are met and fulfilled in an orderly and timely fashion.
7. The location, construction, and operation of the Project are compatible with environmental preservation and the efficient use of resources.
8. The Commission has jurisdiction to ensure compliance with the National Electrical Safety Code standards in the construction and operation of the Project.

From the foregoing Findings of Fact and Conclusions of Law, the Commission now makes the following:

### **Order**

The Commission orders:

1. Certificate of Site Compatibility for an Energy Conversion Facility No. \_\_ is issued to Burke Wind, LLC for the construction, operation, and maintenance of a wind energy conversion facility known as the Burke County Wind Energy Center corresponding to the Project Area depicted on Exhibit 35, Docket No. 95.
2. Within the permitted site, Burke Wind is authorized to site and construct up to 76 wind turbines in proposed and alternative locations, as identified in Exhibit 35, Docket No. 95, along with electric collection and communication lines, a substation, access roads, an operations and maintenance building, and other associated facilities as identified in the Application and at the public hearing.
3. The Certification Relating to Order Provisions with accompanying Tree and Shrub Mitigation Specifications filed with the Commission on February 27, 2019 is incorporated by reference and attached to this Order. The February 27, 2019 Tree and Shrub Mitigation Specifications may be modified upon the mutual agreement of the Commission and Burke Wind.
4. To the extent there are any conflicts or inconsistencies between Burke Wind's Application and the Certification, the Certification provisions control.
5. Burke Wind shall complete a Class III Cultural Resource Survey for the un-surveyed areas within the Project Area as identified in Exhibit 16, Docket No. 80. Burke Wind shall submit cultural resource finds to SHPO for review, and file a copy of SHPO's response with the Commission prior to beginning construction in said areas.

6. If modifications are made to the Project layout, Burke Wind shall complete a Class III Cultural Resource Survey for any previously un-surveyed portions of the designated site affected by Project-related construction activities, in accordance with SHPO guidance, and shall submit cultural resource finds to SHPO for review, and file a copy of SHPO's response with the Commission prior to beginning construction in said areas.

7. If modifications are made to the Project layout, Burke Wind shall complete a wetland determination of any previously un-surveyed areas affected by Project-related activities, as necessary, and file the report with the Commission.

8. If modifications are made to the Project layout that are not covered by the current acoustic analysis, Burke Wind shall conduct an acoustic analysis and file a report with the Commission to ensure the Project complies with the Commission's Avoidance Area sound requirement at all currently occupied residences, unless otherwise agreed to by the landowner.

9. If modifications are made to the Project layout that are not covered by the current shadow flicker analysis, Burke Wind shall conduct a shadow flicker analysis, and file a report with the Commission to ensure the Project meets the Commission recognized shadow flicker 30 hours per year industry standard or less at all currently occupied residences, unless otherwise agreed to by the landowner.

**PUBLIC SERVICE COMMISSION**

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**Randy Christmann**  
**Commissioner**

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**Brian Kroshus**  
**Chairman**

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**Julie Fedorchak**  
**Commissioner**