

**STATE OF NORTH DAKOTA  
PUBLIC SERVICE COMMISSION**

**Emmons-Logan Wind, LLC  
Emmons-Logan Wind Energy Center  
Emmons & Logan Counties  
Siting Application**

**Case No. PU-18-280**

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

**December \_\_, 2018**

**Appearances**

Commissioners Randy Christmann, 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, Emmons-Logan Wind, LLC.

Zachary Pelham, Attorney at Law, Pearce Durick PLLC, 314 E. Thayer Ave., Bismarck, North Dakota 58502, Special Assistant Attorney General on behalf of the North Dakota Public Service Commission.

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

**Preliminary Statement**

On July 19, 2018, Emmons-Logan Wind, LLC (“Emmons-Logan Wind”) filed an Application for a Certificate of Site Compatibility (“Application”) for a wind energy conversion facility known as the Emmons-Logan Wind Energy Center (“Project”), to be located in Emmons and Logan Counties, North Dakota, docketed as Case No. PU-18-280.

On July 19, 2018, Emmons-Logan Wind also filed an application with the Commission in Case No. PU-18-281 for a Certificate of Corridor Compatibility and Route Permit concerning a 6.85 mile long 230 kilovolt (“kV”) electric transmission line and associated facilities to be located in Emmons County, North Dakota.

On October 10, 2018, the North Dakota Public Service Commission (“Commission”) consolidated Case Nos. PU-18-280 and PU-18-281 for public hearing under North Dakota Administrative Code § 69-02-04-04, and deemed the Application complete conditioned upon filing thirty days prior to the public hearing: 1) Sound and shadow flicker analysis with detail on residence locations and participating and nonparticipating landowners; 2) Class III Cultural Resource Survey reports; and, 3) Wetland delineation reports.

Also on October 10, 2018, the Commission issued a Notice of Filings and Consolidated Hearing, and scheduled a public hearing for December 7, 2018 at 10:00 a.m. CST, at the Emmons County Courthouse Auditorium, 100 4<sup>th</sup> Street NW, Linton, North Dakota 58552.

The Notice of Filings and Consolidated Hearing identified the following issues to be considered for the Application in PU-18-280:

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 November 7, 2018, Emmons-Logan Wind filed an acoustic and shadow flicker analyses, a Class III Cultural Resource Survey summary report, and a wetland delineation report.

On December 7, 2018, 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. Emmons-Logan Wind, LLC is a Delaware limited liability company and is a wholly owned, indirect subsidiary of NextEra Energy Resources, LLC.
2. Emmons-Logan 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-18-293.
3. The Project will be owned and operated by Emmons-Logan 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 28,097 acres of land, as depicted in Late-Filed Exhibit 2 (“Project Area”), in Emmons and Logan Counties, North Dakota. The Project will consist of up to 123 turbines and have a name-plate capacity of up to 298.1 megawatts (“MW”).

5. Emmons-Logan Wind expects to use both General Electric (“GE”) 2.5 MW and 1.715 MW wind turbine generators. The GE 2.5 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. In the nacelle of each turbine, a transformer will step up the power collection voltage to 34.5 kV. The power from these transformers will be run through an underground 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, collection substations, 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. Emmons-Logan Wind has signed a 25-year power purchase agreement with Great River Energy 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. Emmons-Logan Wind intends a December 2019 in-service date for the Project.

#### Study of Preferred Location

14. Emmons-Logan Wind coordinated with and received feedback from the following federal and state departments, agencies, and entities:
  - a. Federal: United States Fish and Wildlife Service (“USFWS”); United States Department of Commerce; National Telecommunications and Information Administration; and, 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 Department of Transportation; and, State Historical Society of North Dakota.

c. Other: City of Linton Industrial Development Corporation.

15. Agency consultations and comments are noted in the Application, exhibits, and testimony presented at the public hearing. No state or federal agency or local government entity has indicated that it opposes the Project.

16. Emmons-Logan Wind performed a desktop evaluation centered on the Project Corridor for soils, land use, wetlands and waterbodies, trees and shrubs, and protected species and critical habitats.

17. Emmons-Logan 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 one-mile study area surrounding the Project Area.

18. Emmons-Logan Wind conducted a Class II Architectural Survey of the Project Area and submitted the report to the State Historic Preservation Office (“SHPO”). Emmons-Logan Wind filed a copy of the SHPO’s concurrence letter with the Commission (Exhibit 14) indicating there has been a good faith effort to identify and avoid impacts to significant sites.

19. Emmons-Logan Wind conducted a Class III Cultural Resource Inventory for archaeological resources and submitted the report to SHPO. Emmons-Logan Wind filed a copy of the SHPO’s concurrence letter with the Commission (Exhibit 14) indicating a no significant sites affected determination.

20. Emmons-Logan 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. Emmons-Logan 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. Emmons-Logan 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. No confirmed whooping crane sightings have been documented and the likelihood of whooping cranes is low. The studies demonstrated that no federally endangered, threatened, or candidate species were recorded, and no significant impacts to wildlife are anticipated.

## 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. Emmons-Logan 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 has been avoided to the extent practical. Permanent impacts to prime farmland are less than one percent of the total Project Area. The Commission finds that the amount of prime farmland 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, Emmons-Logan 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, Emmons-Logan 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 15 and 16). Emmons-Logan Wind has sited the Project to minimize permanent wetland impacts to the extent practicable, and only 0.21-acres of wetlands are anticipated to be permanently impacted. Two access roads sited within existing county road right-of-ways will result in impacts to wetlands. Only minor impacts are anticipated, which will qualify under the Clean Water Act for coverage under the nationwide permits programs. The Commission finds that due to the specific location and limits of the county right-of-way, there is no reasonable alternative to avoid impacts to wetlands in these areas.

33. 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 2).

34. Emmons-Logan 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 (Exhibits 3 and 4). The Project meets the Commission's sound level requirement at all currently inhabited residences or community buildings.

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

36. Emmons-Logan 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). Emmons-Logan 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).

37. A shadow flicker analysis was conducted for the Project on existing residences, using realistic modeling assumptions. Based on the shadow flicker analysis, potential shadow flicker levels are expected to be below 30 hours per year at all non-participating residences, and at all but seven participating landowner residences. The seven participating residences with potential 30-hour per year exceedances have executed written waivers, and copies have been filed with the Commission (Exhibit 7).

38. The Project and associated facilities are expected to result in permanent disturbance and occupation of up to 86.7 acres of land. No landowners will be displaced. Emmons-Logan 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.

39. 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.

40. 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.

41. 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

42. Emmons-Logan Wind has agreed to certain steps to mitigate the impact of the Project as indicated in the December 5, 2018 Certification Relating to Order Provisions with accompanying Tree and Shrub Mitigation Specifications, which has been filed with the Commission (Exhibit 2).
43. Emmons-Logan 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.
44. Emmons-Logan 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.
45. During construction, road speed within the Project will be limited to 25 miles per hour to minimize wildlife collisions.
46. Emmons-Logan Wind has conducted extensive coordination and consultation with the NDGFD and USFWS regarding avoidance and minimization related to habitat and wildlife.
47. Emmons-Logan Wind has avoided all USFWS grassland easements and protected wetland basins within USFWS wetland easements.
48. Emmons-Logan Wind sited all wind turbines outside of native prairie of any size, and minimized other permanent impacts to native prairie to less than one acre of the Project's proposed permanent impacts.
49. Emmons-Logan Wind has developed a voluntary Wildlife Conservation Strategy for documenting avoidance and minimization measures.
50. Emmons-Logan 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 ungued permanent meteorological evaluation towers.
51. Throughout operations, Emmons-Logan Wind will implement a voluntary Whooping Crane Identification Training and Curtailment Procedure to shut-down turbines when whooping cranes are found to be within two miles of turbines.
52. Emmons-Logan Wind will complete one-year of post-construction mortality monitoring for birds and bats.

53. Emmons-Logan Wind will file a decommissioning plan and decommissioning financial assurance in compliance with North Dakota Administrative Code Chapter 69-09-09.

54. Emmons-Logan 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 Emmons-Logan Wind and the subject matter of the under North Dakota Century Code Chapter 49-22.

2. Emmons-Logan Wind is a utility as defined in North Dakota Century Code § 49-22-03(14).

3. The wind energy conversion facility proposed by Emmons-Logan Wind is an electric energy conversion facility as defined in North Dakota Century Code § 49-22-03(5).

4. The Application submitted by Emmons-Logan 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 Emmons-Logan Wind, LLC for the construction, operation, and maintenance of a wind energy

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conversion facility known as the Emmons-Logan Wind Energy Center corresponding to the Project Area depicted on Late-Filed Exhibit 2.

2. Within the permitted site, Emmons-Logan Wind is authorized to site and construct up to 123 wind turbines in proposed and alternative locations, as identified in Late-Filed Exhibit 2, 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 December 5, 2018 is incorporated by reference and attached to this Order. The December 5, 2018 Tree and Shrub Mitigation Specifications may be modified upon the mutual agreement of the Commission and Emmons-Logan Wind.

4. To the extent there are any conflicts or inconsistencies between Emmons-Logan Wind's Application and the Certification, the Certification provisions control.

5. If modifications are made to the Project layout, Emmons-Logan 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.

6. If modifications are made to the Project layout, Emmons-Logan 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.

7. If modifications are made to the Project layout that are not covered by the current acoustic analysis, Emmons-Logan 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.

8. If modifications are made to the Project layout that are not covered by the current shadow flicker analysis, Emmons-Logan 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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**Brian Kroshus  
Commissioner**

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**Randy Christmann  
Chairman**

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**Julie Fedorchak  
Commissioner**