

STATE OF NORTH DAKOTA  
PUBLIC SERVICE COMMISSION

Oliver Wind III, LLC  
48 MW Wind Energy Center- Morton County  
Siting Application

Case No. PU-11-561

AFFIDAVIT OF SERVICE REGULAR, INSIDE, OR ELECTRONIC MAIL

STATE OF NORTH DAKOTA  
COUNTY OF BURLEIGH

**Cara DeSaye** deposes and says that:

she is over the age of 18 years and not a party to this action and, on the 23<sup>rd</sup> day of **March, 2012**, she deposited in the United States Mail, Bismarck, North Dakota, 9 envelopes by first class mail, fully prepaid, 7 envelopes by inside mail, all securely sealed and each containing a photocopy, and 12 addressees electronically mailed a copy of:

**Order**

The envelopes and electronic mails respectively were addressed as follows:

See attached list.

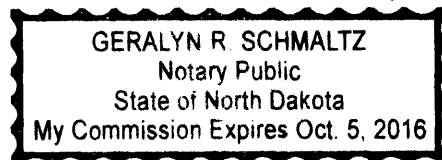
Each post office address shown is the respective addressee's last reasonably ascertainable post office address and each email address is the respective addressee's last reasonably ascertainable electronic mailing address.

*Cara DeSaye*

Subscribed and sworn to before me  
this 23<sup>rd</sup> day of **March, 2012**.

*Geralyn R. Schmaltz*  
Notary Public

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**STATE OF NORTH DAKOTA**  
**PUBLIC SERVICE COMMISSION**

**Oliver Wind III, LLC**  
**48 MW Wind Energy Center – Morton County**  
**Siting Application**

**Case No. PU-11-561**

**FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER**

**MARCH 21, 2012**

**Appearances:**

Commissioners Tony Clark, Kevin Cramer, and Brian P. Kalk.

Wade C. Mann, Attorney at Law, Crowley Fleck, PLLP, 400 East Broadway, Suite 600, Bismarck, North Dakota 58501, on behalf of the Applicant, Oliver Wind III, LLC.

Mitchell D. Armstrong, Special Assistant Attorney General, Legal Counsel for the North Dakota Public Service Commission.

Al Wahl, Administrative Law Judge, Office of Administrative Hearings, 1701 North Ninth Street, Bismarck, North Dakota 58501-1882, as Procedural Hearing Officer.

**Preliminary Statement**

On August 22, 2011, Oliver Wind III, LLC (Oliver Wind III) filed a Letter of Intent (LOI) to submit an application for a Certificate of Site Compatibility for a wind energy conversion facility in Morton County, North Dakota. Oliver Wind III requested in its LOI that the Commission shorten the one-year waiting period between the filing of the LOI and the filing of an application.

On October 11, 2011, the Public Service Commission (Commission) shortened the one-year waiting period to thirty days, and assessed a filing fee of \$40,500.00.

On October 31, 2011, Oliver Wind III, LLC filed an Application for a Certificate of Site Compatibility authorizing construction of the Oliver Wind III Energy Center consisting of wind turbine generators and associated facilities in Morton County, North Dakota (Application).

On November 10, 2011, the Commission deemed the Application complete and issued a Notice of Filing and Notice of Hearing, scheduling a public hearing for December 20, 2011, at 10:00 a.m. CST, at the Mandan City Hall, 205 Second Ave. NW, Mandan, North Dakota 58554.

The Notice identified the following issues to be considered:

1. Will the location, construction, and operation of the proposed facilities produce minimal adverse effects upon 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 location minimize adverse human and environmental impacts while ensuring continuing system reliability and integrity and ensuring that energy needs are met and filled in an orderly and timely fashion?

On December 12, 2011, Oliver Wind III filed its final turbine site plan.

On December 20, 2011, the public hearing was held as scheduled and Oliver Wind III filed an executed Certification Relating to Order Provisions – Wind Energy Conversion Facility Siting.

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. Oliver Wind III is a Delaware limited liability company headquartered in Juno Beach, Florida. Oliver Wind III is a subsidiary of NextEra, also of Juno Beach, Florida.
2. Oliver Wind III was registered in the State of North Dakota effective January 9, 2010.
3. Oliver Wind III proposes to construct a wind energy facility (Oliver Wind III Energy Center) to be located in Morton County, North Dakota, approximately 11 miles south of the City of Center. The Original Project Area consisted of approximately 17,380 acres (25 square miles). At the public hearing, Oliver Wind III agreed to reduce the Project Area to exclude that portion lying to the west of the western edge of Sections 4, 8, 16 and 21 of Township 140 North, Range 83 West. The wind turbines will be placed throughout the Project site.

4. Associated facilities to be constructed within the Project Area include access roads, underground electrical and feeder lines, and an electrical substation.

5. North Dakota Century Code § 49-22-16 provides that no energy conversion facility site shall be designated if it violates any county or city land use, zoning, building rules, regulations or ordinances. Morton County regulates zoning in the Project Area. Oliver Wind III has obtained a conditional use permit from Morton County for the Oliver Wind III Energy Center.

6. Oliver Wind III anticipates commencing construction in late 2012 or early 2013 depending on the status of federal production tax credits and the market for the electricity to be generated. Oliver Wind III does not currently have a customer to purchase the power produced from the Oliver Wind III Energy Center.

#### Project Design

7. The Project will have a name plate (gross) generating capacity of 48 MW, consisting of up to 30 1.6 MW wind turbines and associated facilities. Assuming net capacity factors of 50%, the projected average annual output is estimated at 210,240 MW hours per year.

8. Oliver Wind III plans to use General Electric 1.6 MW xle turbines. These are utility-grade wind turbines with a nominal name plate rating of 1.6 MW. Each turbine will have a 262 feet (80 meter) hub height and a 271 feet (82.5 meter) rotor diameter. The turbines begin operation at wind speeds of 7.8 miles per hour (3.5 meters per second) and reach their rated capacity at a wind speed of 25.7 miles per hour. The turbines are designed to operate in wind speeds of up to 56 miles per hour.

9. Each turbine is secured by a concrete foundation that can vary in design depending upon soil conditions. Turbine lighting is limited to warning lights required by the Federal Aviation Administration (FAA). A control panel inside the base of each turbine tower houses communication and electronic circuitry. Each turbine is equipped with a wind speed and direction sensor that communicates with the turbine's control system to signal when sufficient winds are present for operation. Electricity generated by each turbine is brought to a pad-mounted transformer where the voltage is stepped up to a power collection line voltage of 34.5 kV. Electricity is collected by a series of underground collection lines.

10. The underground collection line feeder system will deliver the electricity to the project substation. At the substation the voltage will be stepped up to 230 kV for transmission via the 230 kV Oliver Wind III transmission line previously sited by the Commission in Case PU-09-724.

11. Oliver Wind III selected the site for the wind energy facility from an environmental, wind resource, transmission and economic perspective. Oliver Wind III utilized wind data from meteorological towers located on the project site. The data indicates that this site is well suited for a wind farm.

12. Construction of the Oliver Wind III Energy Center is expected to take approximately six months, at a total estimated cost of \$81,000,000.00.

13. An Engineering, Procurement, and Construction (EPC) contractor will be retained for construction management of the project. The EPC contractor will use services of local contractors, where possible, to assist in project construction.

14. Safety factors will be incorporated into the wind turbines. Each turbine will be equipped with a Supervisory Control and Data Acquisitions (SCADA) communication technology to control and monitor the turbines. In addition, each turbine is also equipped with a lightning protection system and is grounded and shielded to protect against lightning.

15. Oliver Wind III states that construction and operation of the Oliver Wind III Energy Center will conform to the requirements of the National Electric Safety Code.

#### Siting Criteria

16. North Dakota Administrative Code Chapter 69-06-08 sets forth certain criteria to guide the Commission in evaluating the suitability of granting an application for the certificate of site compatibility. The criteria set forth in North Dakota Administrative Code § 69-06-08-01 is classified as Exclusion Areas, Avoidance Areas, Selection Criteria, and Policy Criteria. With the exception of prime and unique farm land, an energy conversion facility must not be sited within an Exclusion Area. The exception for prime and unique farm land is if the Commission finds that the prime farm and unique farm land that will be removed from use for the life of the facility is of such small acreage as to be of negligible impact on agricultural production, then such exclusion shall not apply. 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 alternate sites. In accordance with the Commission's Selection Criteria, an energy conversion facility shall be approved only if it is demonstrated that no significant adverse impacts will result from the location, construction, and operation of the facility. In accordance with the Commission's Policy Criteria, preference may be given to an applicant demonstrating certain benefits of the energy conversion facility.

17. The project layout indicates up to 5.4 acres of project infrastructure in prime farmland, not including the collection lines that will be buried and would be a temporary disturbance of soil. None of the turbines will be located in prime farmland soils. Unique and prime farmland to be disturbed by this energy conversion facility is of such small acreage as to be of negligible impact on agricultural production.

18. Approximately 64 acres of agricultural production will be impacted due to turbine placement, associated access roads, and project substation. Wind turbine configuration will not result in significant impacts to agricultural production. No impacts on the agricultural quality of the crop land are anticipated. If compaction of soils occurs during construction, Oliver Wind III will work with landowners to alleviate the compaction.

19. Two abandoned coal mines are found in the Project Area. Turbines have been microsited and prior to the start of construction, subsidence hazards related to the presence of abandoned underground coal mines will be mitigated through field studies and geotechnical analysis. Any sinkholes will be avoided in siting of turbines.

20. Oliver Wind III submitted evidence to demonstrate that the proposed energy conversion facility will not have a significant impact on the Selection Criteria set forth in North Dakota Administrative Code § 69-06-08-01(3).

21. Oliver Wind III submitted evidence to demonstrate its commitment to maximize the benefits of the proposed energy conversion facility as far as is possible so as to meet the Policy Criteria set forth in North Dakota Administrative Code § 69-06-08-01(4).

22. Avoidance Areas identified in the project area are the abandoned coal mines as discussed above, as well as woodlands and wetlands. Woodland impacts are not anticipated. Wetlands will be avoided to the extent practicable.

#### Cultural Resources

23. Some potentially-eligible National Register of Historic Property Sites are contained within the project area. Oliver Wind III will avoid construction at all such sites.

24. Oliver Wind III has consulted with the North Dakota State Historic Preservation Office (SHPO). Class I, Class II, and Class III Cultural Resource studies, including review of SHPO's site manuscript files, were conducted for the project area. During the course of the studies, several cultural sites were identified and recommendations were made for avoidance. The recommendations of the archeologists were forwarded to SHPO for review, and SHPO concurred with "No Historic Properties Affected" and "No Significant Sites

Affected" determinations provided the project takes place as described and mapped in the subject reports.

### Wetlands and Wildlife

25. Oliver Wind III has consulted with numerous local, state and federal agencies, which are identified in Appendix D of the Application. No objections by the agencies consulted are contained in the record.

26. A wetland delineation was conducted pursuant to U.S. Army Corps of Engineers' guidance in the fall of 2009 and again in the fall of 2011. The project impacts are below the 0.5 acre threshold, making it eligible under the U.S. Army Corps of Engineers Nationwide Permit (NWP) 12 for utility line activities. The project is also below the 0.1 acre notification and mitigation thresholds of NWP 12. As a result, a Section 404 Permit as well as notification to the USACE – Omaha District Office is unnecessary. All jurisdictional wetlands will be avoided during the construction phase of the project.

27. Avian surveys were conducted in the spring and fall of 2008 covering the project area. No federally listed species were observed in the spring or fall surveys. Additionally, due to the limited suitable roosting and foraging habitat, it was determined that there was a low to moderate likelihood of the occurrence of any bat species in the project area. Oliver Wind III also commissioned a detailed likelihood of occurrence assessment for whooping cranes. There are no historical records of whooping cranes occurring within the project area. Based upon the low magnitude of potential habitat loss, the low probability of site usage and the avoidance and minimization measures being implemented by Oliver Wind III, the potential for adverse effects on whooping cranes is low.

28. Other minimization measures that Oliver Wind III will implement are modification or curtailment of construction activities within one mile of whooping cranes observed onsite during construction; post construction mortality monitoring surveys for birds and bats for one year following construction of the project; and curtailment of turbines within one mile if a whooping crane is observed during operation of the wind energy center.

29. Oliver Wind III will implement its Wildlife Response Reporting System (WRRS) once turbine construction is completed. The WRRS will include protocols for field technicians to report and document avian mortalities during routine maintenance operations.

### Sound and Flicker Studies

30. Oliver Wind III included an acoustic assessment in Appendix C of the Application. The results of the acoustic modeling were compared to the U.S. Environmental Protection Agency (EPA) environmental noise guidelines, and the

Occupational Safety and Health Administration (OSHA) regulatory limits for worker exposure and public safety. The acoustic assessment illustrated a worst case scenario (downwind, full rotational speed, high air density, low background sound levels). A cumulative noise analysis found that a 48.6 dBA  $L_{eq}$  threshold (corresponding to a 55 dBA  $L_{dn}$  EPA guideline) was exceeded under anomalous meteorological conditions at two receptors. Both of these receptors were either unoccupied structures or participating residences.

31. Oliver Wind III included a Shadow Flicker Impact Analysis for the Oliver Wind III Energy Center in Appendix C of the Application. Oliver Wind III performed a shadow flicker impact study to determine potential impacts on occupied residences located in or near the project. Shadows cast by moving blades were assessed for all wind turbines located within 1.5 kilometers (4921.26 feet) of each occupied residence (receptor). The analysis was based assuming worst case conditions for shadow flicker (full sunlight and blades perpendicular to incoming sunlight) so as to conservatively estimate the potential amount of shadow impact hours for a year.

32. While there are no established standards, the siting recommendation of the American Wind Energy Association is 30-40 hours per year. A total of 31 potentially sensitive receptor locations were identified in the study. None of the 31 receptors had expected shadow flicker impacts predicted for more than 30 hours per year. The maximum predicted shadow flicker at any receptor is 22 hours and 58 minutes per year.

#### Further Mitigative Measures

33. No turbines will be placed within 1400 feet of an occupied residence.

34. Oliver Wind III has proposed setbacks of 440 feet (1.1 x turbine height) from existing transmission lines, improved road right-of-ways, railroads and property boundaries.

35. Oliver Wind III will maintain ground water protection and soil conservation practices to protect topsoil and adjacent resources, and to minimize soil erosion during construction and operation of the project. Best Management Practices (BMPs) for erosion and sediment control will be used to minimize wind and water erosion in the project area during and after construction. Only land needed for the facility will be impacted. Temporarily disturbed areas will be restored and reseeded for planted with native materials.

36. Oliver Wind III will restrict construction and operation activities near active raptor nests; map and flag raptor nests found during construction; place turbines as far away from raptor nests as project engineering constraints permit; and avoid the removal of trees to the extent practicable.

37. Oliver Wind III has developed a management plan to protect against the spread of noxious weeds throughout the project area or adjacent areas during construction and ongoing operations.

38. Oliver Wind III has a legal obligation to decommission the wind energy facilities.

39. Oliver Wind III made other representations and covenants as contained in the Certification Relating to Order Provisions—Wind Energy Conversion Facility Siting executed by Oliver Wind III and filed with the Commission on December 20, 2011, which is incorporated into these Findings of Fact.

From the foregoing Findings of Fact, the Commission now makes its:

### **Conclusions of Law**

1. The Commission has jurisdiction over this proceeding under North Dakota Century Code Chapter 49-22.
2. The energy conversion facility proposed by Oliver Wind III is an energy conversion facility as defined in North Dakota Century Code § 49-22-03(5).
3. The application submitted by Oliver Wind III meets the site evaluation criteria required by North Dakota Century Code Chapter 49-22.
4. The location, construction, and operation of the proposed energy conversion facility will produce minimal adverse effects on the environment and upon the welfare of the citizens of North Dakota.
5. The proposed energy conversion facility is compatible with environmental preservation and the efficient use of resources.
6. The proposed energy conversion facility 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 Commission has jurisdiction to ensure compliance with National Electric Safety Code standards in the construction and operation of the proposed energy conversion facility.
8. The proposed project is of such design, location, and purpose that it will produce minimal adverse effects.

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

**Order**

The Commission orders:

1. Certificate of Site Compatibility for an Energy Conversion Facility No. 27 is issued to Oliver Wind III for the construction, operation and maintenance of a wind energy facility known as the Oliver Wind III Energy Center.
2. The site as designated in the application is located in northern Morton County approximately 11 miles south of the City of Center, North Dakota, and is designated as the site for construction of the wind energy facility. The site designated is as reflected in Late-Filed Exhibit 3.
3. Within the permitted area, Oliver Wind III is authorized to site and construct up to 48 MW of wind turbines in proposed and alternate locations, along with electric collection and communication lines, a project substation, access roads, and other associated facilities as identified in the application and at the hearing.
4. Oliver Wind III shall comply with the December 20, 2011, Certification Relating to Order Provisions – Wind Energy Conversion Facility Siting that is incorporated by reference and attached to this Order.

**PUBLIC SERVICE COMMISSION**

  
\_\_\_\_\_  
**Kevin Cramer**  
**Commissioner**

  
\_\_\_\_\_  
**Tony Clark**  
**Chairman**

  
\_\_\_\_\_  
**Brian P. Kalk**  
**Commissioner**

**PUBLIC SERVICE COMMISSION**

**STATE OF NORTH DAKOTA**

**Certificate of Site Compatibility for Energy Conversion Facility**

**Certificate Number 27**

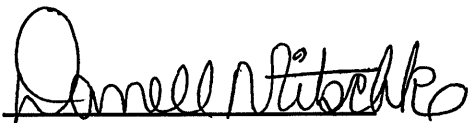
*This is to certify that the Commission has designated an energy conversion facility site for Oliver Wind III, LLC's Oliver III Energy Center consisting of up to 30 1.6 MW wind turbine generators and associated facilities in Morton County, North Dakota.*

*The facility may be sited in this designated location in compliance with the energy conversion facility siting criteria. This certificate is issued in accordance with the Finding of Fact, Conclusion of Law and Order of the Commission in Case No. PU-11-561 dated March 21, 2012 and is subject to the conditions and limitations noted in the order.*

*Bismarck, North Dakota, March 21, 2012.*

**ATTEST:**

**PUBLIC SERVICE COMMISSION**



**Executive Secretary**



**Commissioner**