

**STATE OF NORTH DAKOTA
PUBLIC SERVICE COMMISSION**

**Oliver Wind III, LLC
Oliver III Wind Energy Center – Oliver and Morton Counties
Siting Application**

Case No. PU-16-123

**Oliver Wind III, LLC
230 kV Transmission Line – Oliver and Morton Counties
Siting Application**

Case No. PU-16-122

PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER

June __, 2016

Appearances

Commissioners Julie Fedorchak, Randy Christmann, and Brian P. Kalk.

Wade C. Mann and Casey A. Furey, Crowley Fleck, PLLP, 100 West Broadway, Suite 250, Bismarck, ND 58502 on behalf of the Applicant, Oliver Wind III, LLC.

Brian D. Schmidt, Special Assistant Attorney General, North Dakota Public Service Commission.

Patrick J. Ward, Administrative Law Judge, Office of Administrative Hearings, 2911 North 14th Street – Suite 303, Bismarck, ND 58503, as Procedural Hearing Officer.

Preliminary Statement

On March 4, 2016, Oliver Wind III, LLC (Oliver Wind III) filed an Application for a Certificate of Site Compatibility for a wind energy conversion facility known as the Oliver III Wind Energy Center (Wind Project) to be located in Oliver and Morton Counties, North Dakota.

On March 4, 2016, Oliver Wind III also filed an Application for a Certificate of Corridor Compatibility, Route Permit and Waiver of Procedures and Time Schedules for an electric transmission line (Transmission Project) to be located in Morton and Oliver Counties, North Dakota.

On April 5, 2016 the North Dakota Public Service Commission (Commission) consolidated Cases Nos. PU-16-123 and PU-16-122, and deemed the applications complete conditioned upon filing 1) final turbine locations with detail on residence locations and participating and nonparticipating landowners, 2) cultural resource studies, and 3) natural resource studies, at least 30 days prior to the hearing and issued a Notice of Filings and Consolidated Hearings, and scheduled a public hearing for June 1, 2016, at 9:00 a.m. CDST, at Mandan City Hall, 205 Second Avenue, NW Mandan, North Dakota 58554. The Notice

identified the following issues to be considered in the application for waiver of procedures and time schedules in Case No. PU-16-122:

1. Are the proposed facilities of such length, design, location, or purpose that they will produce minimal adverse effects and that adherence to applicable procedures and time schedules may be waived?
2. Is it appropriate for the Commission to waive any procedures and time schedules as requested in the application?

The Notice also identified the following issues to be considered in the application for certificate of site compatibility in Case No. PU-16-123 and the applications for certificate of corridor compatibility and route permit in Case No. PU-16-122:

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 April 26 – 28, 2016, Oliver Wind III filed its cultural and natural resource studies.

On April 29, 2016, Oliver Wind III filed a condensed Project Boundary map containing final turbine locations.

On May 27, 2016 Oliver Wind III filed its Certification Relating to Order Provisions and Tree and Shrub Mitigation for both PU-16-123 and PU-16-122.

The public hearing was held as scheduled on June 1, 2016. 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. The applicant, Oliver Wind III, is a Delaware limited liability company headquartered in Juno Beach, Florida, and is registered to do business in the State of North Dakota.
2. Oliver Wind III proposes to construct a wind energy facility within approximately 14,384 acres of land in Morton and Oliver Counties, North Dakota, approximately thirteen miles northwest of Bismarck and nine miles south of the city of Center. The project is referred to as the Oliver III Wind Energy Center. The wind energy center will include an approximate 4.5-

mile, 230 kilovolt (kV) electric transmission line and associated line facilities also in Morton and Oliver Counties, North Dakota.

3. The wind project area depicted in Hearing Exhibit No. 7 identifies the site for the Wind Project (Project Area). Hearing Exhibit No. 2 identifies the proposed corridor (Project Corridor) and route (Project Route) for the Transmission Project.
4. Oliver Wind III evaluated a study area and ultimately selected the proposed sites for the Wind and Transmission Projects based on a number of factors, including: the identified need, the quality of the wind source, on-site electrical infrastructure for interconnection to the grid, landowner support, community input, agency coordination, compatibility with existing land use and environmental features, compliance with the Commission's siting criteria, compliance with Morton and Oliver County requirements, and economic considerations.
5. North Dakota Century Code § 49-22-16(4) provides that a site shall not be designated that violates the rules of any state agency. Compliance with an agency's rules shall be presumed if the agency fails to present its position with respect to the proposed facility at the public hearing. Oliver Wind III coordinated with and received feedback from the following federal and state departments, agencies, and entities:
 - a. Federal – United States Fish and Wildlife Service (USFWS); U.S. Army Corps of Engineers (USACE);
 - b. State – North Dakota Aeronautics Commission; State Historical Society of North Dakota; North Dakota Game and Fish Department (NDGF); North Dakota Parks and Recreation Department; North Dakota Department of Health; North Dakota State Water Commission;
6. Agency consultations and comments are noted in the application, exhibits, and testimony presented at the public hearing. No objections to the Projects were raised by any state or federal agencies or local government entities.
7. North Dakota Century Code § 49-22-16 provides that no energy conversion facility site shall be designated if it violates any local land use, zoning or building rules, regulations, or ordinances. Oliver Wind III has obtained conditional use permits from Morton and Oliver Counties.
8. All easements and other land rights necessary to build and operate the Wind and Transmission Projects have been obtained. Oliver Wind III has secured options for the purchase of land for the collection substation/O&M site and also for the switchyard.
9. Oliver Wind III has signed a Power Purchase Agreement with Minnkota Power Cooperative, Inc. to deliver energy produced at the Oliver III Wind Energy Center through the transmission line to an interconnection point on the Center to Mandan 230 kV transmission line.

10. Oliver Wind III has plans to begin construction on the Projects in July 2016 with an in-service date of December 2016. The Wind Project is estimated to cost \$153 million, and the Transmission Project and associated facilities are estimated to cost \$11 million.

Project Design

11. The Wind Project will consist of up to 48 turbines and have a name-plate generating capacity of up to 100 megawatts (MW). Oliver Wind III expects to use both General Electric (GE) 2.1 MW and 1.79 MW Xle wind turbine generators. Depending on turbine availability and economic considerations, among other factors, Oliver Wind III may select another turbine model.
12. The turbines have Supervisory Control and Data Acquisitions (SCADA) communication technology to allow control and monitoring of the wind farm. The SCADA communications system permits automatic, independent operation and remote supervision allowing the simultaneous control of many wind turbines.
13. The turbine towers will be conical tubular steel with a hub height of up to 262 feet. The portion of the foundation that is above ground is 15 to 16 feet wide at the base of the tower. Each turbine will be grounded and shielded to protect against lightning strike.
14. At the base of each turbine, a step-transformer will be installed to step up the voltage to 34.5 kV. The electricity from these transformers will be run through an underground collection system consisting of various sized buried cables generally located on private property or public right-of-way. Collection lines will be buried 48 inches deep and will not affect farming equipment. At the point where the access and public roads meet, the collection system will continue as underground lines. All collection system cables will terminate at an on-site collector substation, which includes a transformer to step up the voltage from 34.5 kV to 230 kV for interconnection to the transmission grid.
15. Associated facilities to be constructed within the project area include access roads, electrical collection systems, an operation and maintenance building, a collection substation, and metrological towers.
16. The single circuit, alternating current 230 kV transmission line will be constructed using steel monopole structures. The average height of the single-pole structures will range from 110 to 130 feet, depending on the final engineering design. The span between structures will average 1,100 feet and will vary depending on geological or engineering design.
17. The transmission line will require approximately 11 new structures. The location of the transmission line structures are depicted in Hearing Exhibit No. 2.
18. The transmission line will include a shield wire, which will be strung at the top of the poles to provide lightning protection. The shield wire will contain a fiber-optic core that forms a part of the communication system for the transmission line, allowing for monitoring and remote control of substation and interconnection facility components.

19. The collection substation will be located east of 33rd Avenue and adjacent to 32nd Street in Section 10, Township 140 North, Range 83 West. The switchyard will be located at the northern terminus of the proposed Transmission Project in the northeast quarter of Section 23, Township 141 North, Range 83 West.
20. The projects will be constructed pursuant to National Electric Safety Code requirements.

Siting Criteria

21. North Dakota Administrative Code Chapter 69-06-08 sets forth certain criteria to guide the Commission in evaluating the suitability of a proposed energy conversion facility site and proposed transmission facility corridor and route. The criteria set forth in North Dakota Administrative Code § 69-06-08-01 with respect to energy conversion facilities, and in North Dakota Administrative Code § 69-06-08-02 with respect to transmission facility corridors and routes, are classified as Exclusion Areas, Avoidance Areas, Selection Criteria, and Policy Criteria.

Wind Project Exclusion Areas

22. 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 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.
23. Less than one percent of the Wind Project area consists of prime farmland. Prime farmland has been avoided to the extent practical. The Commission finds that the prime farmland which may be disturbed by this energy conversion facility is of such small acreage as to be of negligible impact on agricultural production.

Wind Project Avoidance Areas

24. 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.
25. With respect to Avoidance Areas, historical resources are present within the Project Area, but the project will be sited to avoid direct impacts to historical resource sites.
26. Areas that are geologically unstable are potentially present within the Project Area, but the project will be sited to avoid areas known to be geologically unstable through the use of geotechnical testing prior to construction of any permanent infrastructure.

27. Wetlands are present within the Project Area, but permanent impacts to wetland will be avoided or minimized as practicable.
28. Some trees and shrubs are located within the Project Area, but the Project will be sited to minimize tree removal 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.
29. A single location exists within the Project Area where due to operation of the facility, the sound levels within 100 feet of an inhabited residence may exceed 50 decibels (dBA). Oliver Wind III has obtained a written waiver from this resident, who is a participating landowner.

Transmission Project Exclusion Areas

30. Exclusion Areas must be excluded in the construction and the consideration of a route for a transmission facility. Exclusion Areas may be located within the corridor, but at no point shall such an area encompass more than 50 percent of the corridor width unless there is no reasonable alternative. A buffer zone of a reasonable width to protect the integrity of an Exclusion Area must be included in the siting of the transmission facility.
31. As to Exclusion Areas, archeological sites have been identified within the 1-mile Study Area. No Exclusion Areas are present within the Project Corridor for the transmission line. All direct impacts to archeological sites will be avoided or spanned. National Register-eligible sites within or adjacent to the construction easement will be protected during construction to avoid impacts.

Transmission Project Avoidance Areas

32. Avoidance Areas may not be considered in routing of a transmission facility unless the applicant shows that under the circumstances there is no reasonable alternative. In determining whether an Avoidance Area should be designated for a transmission 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 routes.
33. With respect to Avoidance Areas, historical resources are present within the Project Corridor, but the project will be sited to avoid direct impacts to historical resources.

Wind and Transmission Project Selection and Policy Criteria

34. The proposed Wind Project and Transmission Project will not have a significant adverse impact on the Selection Criteria set forth in North Dakota Administrative Code §§ 69-06-08-01(5) and 69-06-08-02(3). Oliver Wind III has committed to maximize the benefits of the proposed projects so far as possible as to meet the Policy Criteria set forth in North Dakota Administrative Code §§ 69-06-08-01(6) and 69-06-08-02(4).

35. The Projects and associated facilities are expected to occupy and disturb up to approximately 55 acres of land that will be permanently impacted by the Project. No landowners will be displaced. Oliver Wind III will continue to work with landowners to minimize land use disruptions from the facilities. No impacts to irrigation or quality of the agricultural land are anticipated.
36. During construction, the Projects 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. County and township roads will be restored in accordance with the Certification Relating to Order Provisions – Energy Conversion Facility Siting, and Certification Relating to Order Provisions – Transmission Facility Siting, both dated May 27, 2016. During operation, no adverse effects to transportation facilities or networks are anticipated.
37. No significant adverse impact is foreseen on the ability of the affected areas to provide community services, such as housing, health care, schools, police, and fire protection, water and sewer, solid waste management, transportation, or public safety. The Projects are expected to be of economic benefit to the affected area through the creation of construction and operation and maintenance jobs; easement payments to landowners; state and local tax revenue; and local expenditures for equipment, fuel, operating supplies, products and services.
38. Oliver Wind III has engaged with the FAA regarding a potential line-of-sight radar issue at the Bismarck Airport. Mitigation measures to address such a hazard, if found, would include radar system updates, which Oliver Wind III is committed to complete if the studies determine that such measures are required. A Determination of No Hazard will ultimately be obtained from the FAA on the final Project layout. No other 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.
39. Energy produced from the Oliver III Wind Energy Center and injected into the Center to Mandan 230 kV line will be delivered into Minnkota Power Cooperative's integrated system to serve electric customers in North Dakota.

Cultural Resources

40. Oliver Wind III completed a Class II architectural history reconnaissance survey for the Projects. Oliver Wind III also completed a Class I literature search for the Study Area, as well as a Class III cultural resource inventory of all archaeological areas in the Project Area. Concurrences from the State Historic Preservation Officer (SHPO) have been filed with the Commission.
41. In the event the Projects' layouts change from the layout provided in Hearing Exhibit Nos. 2 and 7, Oliver Wind III will complete Class III cultural resource survey work for any previously un-surveyed areas, per SHPO's guidance; will submit the findings to SHPO for

review; and will obtain and file with the Commission a copy of SHPO's response prior to beginning construction in those areas.

42. Project facilities will avoid identified cultural resource sites and cultural resources are not expected to be impacted by the Projects.

Wetlands, Woodlands, and Wildlife

43. Woodlands are sparse in the Project Area and Project Corridor. If trees or shrubs are impacted by the Projects, Oliver Wind III will comply with the Commission's tree and shrub mitigation specifications.
44. A wetland determination was completed for the Projects. In the event the Project layout changes, Oliver Wind III will complete a wetland determination of any previously un-surveyed areas, as necessary. Oliver Wind III will minimize permanent wetland impacts from the Projects to the extent practicable. Any potential impacts are expected to qualify for coverage under the nationwide permits 12 and 14 without pre-construction notification.
45. Oliver Wind III conducted fall and spring point counts, lek aerial surveys, a ground-based raptor nest survey, eagle use survey, a study of bat activity, and an analysis of potential whooping crane habitat in the area of the wind energy facility. 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.
46. Oliver Wind III will continue to coordinate with the USFWS with respect to potential mitigation measures. Oliver Wind III will prepare a Wildlife Conservation Strategy prior to operation of the Project, which will outline specific conservation methods.
47. Oliver Wind III has coordinated with numerous local, state, and federal agencies identified in the Applications. After coordination, neither USFWS, NDGF, nor any other agency has objected to construction of the Projects, or raised any objections to Oliver Wind III's proposed wildlife mitigation measures.

Sound and Shadow Flicker Analyses

48. A sound analysis was conducted for the Wind Project. The analysis demonstrates sound levels for the Wind Project will comply with the Commission's Avoidance Area requirement that sound levels within 100 feet of an inhabited residence or community building not exceed 50 dBA unless a waiver is obtained. The Wind Project meets the Commission's sound level requirement at all but one participating landowner's residence for which a waiver was obtained as demonstrated in Hearing Exhibit No. 25.
49. A detailed shadow flicker analysis was conducted for the Wind Project, 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.

Additional Mitigation Measures

50. Oliver Wind III made certain representations and covenants as contained in the Certification Relating to Order Provisions – Wind Energy Conversion Facility Siting with accompanying Tree and Shrub Mitigation Specifications and the Certification Relating to Order Provisions – Transmission Line Facility with accompanying Tree and Shrub Mitigation Specifications, which have been filed with the Commission.
51. The Commission's setbacks applicable to the Project with respect to roads are one and one-tenth times the height of the turbine from the interstate or state roadway right-of-way; and one and one-tenth times the height of the turbine plus seventy-five feet from the centerline of any county or maintained township roadway. Oliver Wind III has also agreed to a setback of 1,400 feet from any occupied dwelling and the Morton County setback of 1.5 times turbine height from the property line of non-participating landowners.
52. All setbacks applied will be measured from the center of the base of the turbine to the closest part of the applicable feature.
53. Oliver Wind III 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.
54. Subject to FAA approval, Oliver Wind III will use commercially reasonable efforts to install an Aircraft Detection and Lighting System or other technology suitable to the Commission on the Oliver Wind III project as soon as practicable after commercial operation.
55. Oliver Wind III will not utilize turbine site 17 as identified at the public hearing, and instead will activate alternative turbine site ALT 1 as also identified at the public hearing.
56. To the extent practicable, Oliver Wind III will take all reasonable measures to avoid heavy equipment traffic on 31½ Avenue in rural Mandan.
57. Oliver Wind III will coordinate with local authorities and first responders regarding emergency response measures as part of the Projects commissioning activities.
58. Oliver Wind III will participate in the North Dakota One-Call Excavation Notice System.

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 wind 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 proposed transmission line and associated facilities are transmission facilities as defined by North Dakota Century Code § 49-22-03(12).
4. The applications submitted by Oliver Wind III meet the site evaluation criteria and the corridor and route evaluation criteria required by North Dakota Century Code Chapter 49-22.
5. The location, construction, and operation of the proposed energy conversion facility and the proposed transmission facilities will produce only minimal adverse effects on the environment and upon the welfare of the citizens of North Dakota.
6. The proposed energy conversion facility and proposed transmission facility corridor and route 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 proposed energy conversion facility and proposed transmission facility are compatible with environmental preservation and the efficient use of resources.
8. The requested waivers of procedure and time schedules are justified based upon the minimal impacts on the environment and the welfare of the citizens of North Dakota; the lack of objection to the proposed transmission facility by federal, state, and local government bodies and agencies; the lack of objection by landowners along the proposed corridor and route; and the objective of having a reliable, integrated transmission system in North Dakota.
9. The proposed transmission corridor and route are of such length, design, location, and purpose that they will produce minimal adverse effects.
10. The Commission has jurisdiction to ensure compliance with National Electric Safety Code standards in the construction and operation of the energy conversion facility.

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

Order

The Commission orders:

PU-16-123

1. Certificate of Site Compatibility for an Energy Conversion Facility No. _____, is issued to Oliver Wind III, LLC for the construction, operation, and maintenance of an energy conversion facility known as the Oliver III Wind Energy Center corresponding to the Project area depicted in Exhibit No. 7.

2. Within the permitted area, Oliver Wind III is authorized to site and construct up to 100 megawatts within the designated area consisting of up to 48 wind turbines in proposed and alternate locations, as identified in Exhibit No. 7, along with electric collection and communication lines, a project substation, access roads, an operations and maintenance building, an interconnection yard, along with other associated facilities as identified in the application and at the hearing.
3. If modifications are made to the Project layout or transmission line, Oliver Wind III 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; shall submit cultural resource findings to SHPO for review; and shall obtain and file a copy of SHPO's response with the Commission prior to beginning construction in said areas.
4. If modifications are made to the Wind Project layout or transmission line, Oliver Wind III 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.
5. In the event Wind Project modifications occur that are not covered by its current sound analysis, Oliver Wind III shall conduct a sound analysis and file a report with the Commission to ensure the Project complies with the Commission's Avoidance Area Sound Requirement.
6. Oliver Wind III shall site Project turbines so as to meet a shadow flicker goal of 30 hours per year or less at each currently occupied residence, considering site-specific conditions, unless otherwise agreed to by the landowner.
7. In the event Wind Project modifications occur that are not covered by its current shadow flicker analysis, Oliver Wind III shall conduct a shadow flicker analysis and file a report with the Commission to ensure this requirement is met.
8. The Certification Relating to Order Provisions – Transmission Facility Siting with accompanying Tree and Shrub Mitigation specifications as filed with the Commission on May 27, 2016, are incorporated by reference and attached to this Order.

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9. Oliver Wind III's application for waiver of procedures and time schedules is granted.
10. Certificate of Corridor Compatibility No. ____ is issued to Oliver Wind III, LLC designating a corridor for the construction, operation, and maintenance of the proposed 230 kV transmission line and associated facilities in Morton and Oliver Counties, North Dakota, as identified in Hearing Exhibit No. 2. For purposes of the Certificate, the corridor will consist of 250 feet.

11. Route Permit No. ____ is issued to Oliver Wind III, LLC granting authority to construct and operate the proposed 230 kV approximate 4.5-mile transmission line and associated facilities in Morton and Oliver Counties, North Dakota, as described in the application, supplements to the application, at the public hearing, and in late-filed exhibits.
12. The Certification Relating to Order Provisions – Transmission Facility Siting with accompanying Tree and Shrub Mitigation specifications as filed with the Commission on May 27, 2016, are incorporated by reference and attached to this Order.

PUBLIC SERVICE COMMISSION

Randy Christmann
Commissioner

Julie Fedorchak
Chairman

Brian P. Kalk
Commissioner