

# 200 MW Oliver Wind IV Wind Energy Center Project Oliver County

## *Topsoil Inspection Report*

**Docket Number: PU-23-317**

Prepared for North Dakota Public Service Commission



May 2024

Topsoil Inspection Report

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# 1 Executive Summary

The North Dakota Public Service Commission (PSC) retained Meadowlark Environmental, LLC (Meadowlark) to complete a topsoil inspection for the construction of the Oliver Wind Energy Center (Project) in Oliver County North Dakota (ND), constructed by NextEra Energy Resources, LLC (NextEra). The purpose of the inspections is to ensure the project is constructed in compliance with siting laws and rules and the applicable PSC Orders for the project.

The topsoil inspection was conducted on May 9<sup>th</sup> and 10<sup>th</sup>, 2024. The inspection occurred during the start of construction activities to observe the removal of topsoil. Construction began at the location of the Project's laydown yard near the south end of the Project, with the removal of topsoil in a field previously used for crop production. The inspection was conducted to observe and document that equipment operators demonstrated the necessary skill for proper topsoil removal and knowledge of topsoil removal and segregation requirements. No major issues were observed. Overall, equipment operators demonstrated the ability to remove topsoil until the color change appears between topsoil and subsoil. Vegetation removal was consistent with the tree and shrub mitigation plan.

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## 2 Background and Scope

### 2.1 Introduction

The Oliver Wind IV Energy Center (Project) is being constructed by NextEra to construct an up to 200 megawatt (MW) wind energy facility known as the Oliver Wind IV Energy Center consisting of up to 73 wind turbine generators and associated facilities including three alternative turbine locations, access roads, underground electrical collection and communication systems, two aircraft detection lighting systems (ADLS), a collection substation, an operations and maintenance (O&M) facility, a permanent and a temporary meteorological evaluation tower (MET tower), and temporary workspaces for a construction laydown yard and a concrete batch plant. The Project Area encompasses approximately 22,291 acres in Oliver County, North Dakota. Oliver Wind IV expects the Project to be placed in service by December 2024.

Construction for the project began with the removal of topsoil for an approximately 20-acre construction laydown yard and location for O&M facilities. The laydown yard is located in Section 20, Township 142 North, Range 85 West in Oliver County, North Dakota.

The Project is under the jurisdiction of the North Dakota Public Service Commission (PSC), which issued its Findings of Fact, Conclusions of Law, and Order on April 29, 2024, and issued the Certificate of Site Compatibility No. 67 for Case No. PU-23-317.

### 2.2 Regulatory Purpose and Need

The North Dakota Energy Conversion and Transmission Facility Act (North Dakota Century Code Chapter 49-22) charges the Public Service Commission with determining that the location, construction, and operation of jurisdictional energy conversion and transmission facilities will produce minimal adverse effects on the environment and the welfare of citizens of North Dakota. Inspections during construction ensure that such projects are built in compliance with the siting laws (North Dakota Century Code Chapter 49-22) and rules (North Dakota Administrative Code Article 69-06) and the applicable Commission Orders.

### 2.3 Scope of Work

The North Dakota Public Service Commission retained Meadowlark to perform a topsoil inspection of the Project. Meadowlark's scope of work was to complete and document an on-site inspection during the start of construction to verify that topsoil was being removed and segregated from subsoil in compliance with the siting laws, rules, and applicable Commission Orders. This report contains site visit observations and a summary of findings and issues that should be addressed for the Project.

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## 3 Findings of Site Inspection

### 3.1 Methods

Zach Peterson, Project Manager/Field Inspector and Samantha Calkins, Natural Resources Technician for Meadowlark visited the Project site on May 9 and 10, 2024, to conduct the topsoil inspection. Representative for NextEra, DJ Gleason and Heath Kapke, Superintendent for Blattner Energy accompanied Mr. Peterson and Ms. Calkins. The inspection occurred between 9:00 AM and 12:30 PM. Construction activities for the Project were commencing for the Project at the time of the visit. Construction started with the clearing of approximately 20 acres of crop field to be used as a laydown yard and location for O&M facilities for the Project.

Mr. Peterson and Ms. Calkins observed equipment operators removing topsoil within a crop field with rolling topography to document that operators demonstrated the proper skill and techniques for removing topsoil and segregating the topsoil from any subsoil removed. The ability of operators to identify changes in soil color and characteristics as well as understanding the rules and regulations for topsoil removal were also noted. Photos (iPhone 12) were taken with a GIS overlay and without the overlay at observation points to record the geographic locations of the observation points visited during the inspection.

### 3.2 On-Site Inspection Observations

Mr. Peterson and Ms. Calkins met Mr. Gleason and Mr. Kapke at the laydown yard site where construction activities kicked off for the Project. Bulldozers, scrapers, and grader machines simultaneously began stripping topsoil within the crop field and graders collected removed topsoil and stockpiled it along the east end of the site. Topsoil depth varied from 6 to 10 inches, with the top of the hillsides having shallower topsoil depth and the bottom of the hills having the deepest depth. Equipment operators carefully removed the topsoil until the subsoil layer became visible and moved the topsoil into piles on the east side of the area being cleared. The subsoil was not removed, so the topsoil piles were properly segregated from subsoil. Silt fence was installed along the eastern and northern sides of the site to prevent runoff from the topsoil piles from moving off the site. Straw waddles and additional silt fence will be placed around the edges of the topsoil piles to prevent sediment runoff in the event of heavy rainfall.

The equipment operators demonstrated the proper understanding of the rules for topsoil removal and how to properly identify the change in soil characteristics between the topsoil and subsoil layers. Multiple passes with the blades were used over the same ground to remove the topsoil in increments until the subsoil became visible. This technique adequately removed the topsoil at proper depths across the varying contours of the area being cleared. Topsoil removal was being conducted in compliance with the Commission's Order.

## 4 Issues to Resolve and Recommendations

Topsoil segregation was noted to be acceptable in the areas observed. Equipment operators were reminded to strip soil, where it existed, down to a maximum of 12 inches or to the depth where subsoil appeared. Equipment operators have demonstrated proficiency in topsoil removal and segregation in compliance with the Commission's Order.

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Potential Issues	Recommendations
<b>SWPPP Maintenance</b>	Silt fence, straw waddles, and other BMPs must be regularly checked to ensure sediment from the site does not runoff into the irrigation ditch and adjacent property.
<b>Dust Control</b>	During construction, road speed within the Wind Project will be limited to 25 miles per hour to minimize wildlife collisions and increase traffic safety by reducing dust emissions as a result of construction activities.

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## 5 Signatures

The services performed by Meadowlark staff for this project have been conducted in a manner consistent with the technical skill and degree of care exercised by professionals currently practicing in this discipline under similar time and budget constraints. Findings and recommendations represent our professional judgement and are based on available information and accepted practices. No warranty is implied or expressed beyond this.



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Zach Peterson, Inspector

5/23/2024

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Date

## Appendices



## Photo Log and Observation Maps

## On-Site Photographs

## 200MW Oliver Wind IV Energy Center Project- Oliver County

<p>NE E SE S</p> <p>0 60 90 120 150 180 210</p> <p>☉ 125°SE (T) LAT: 47.111064 LON: -101.489444 ±9ft ▲ 2271ft</p>  <p>09 May 2024, 10:54:35</p>	<p>Photo #: 1</p> <p>Direction: Southeast</p> <p>Description: Equipment staged to begin topsoil removal at laydown yard.</p> <p>Observers: Peterson/Calkins</p> <p>Date: 05/9/2024</p> <p>Latitude: 47.111064</p> <p>Longitude: -101.489444</p>
<p>N NE E SE S</p> <p>0 30 60 90 120 150 180</p> <p>☉ 95°E (T) LAT: 47.110918 LON: -101.489147 ±13ft ▲ 2275ft</p>  <p>09 May 2024, 10:54:59</p>	<p>Photo #: 2</p> <p>Direction: East</p> <p>Description: Topsoil removed after first pass with scraper.</p> <p>Observers: Peterson/Calkins</p> <p>Date: 05/9/2024</p> <p>Latitude: 47.110918</p> <p>Longitude: -101.489147</p>



## On-Site Photographs

## 200MW Oliver Wind IV Energy Center Project- Oliver County

 <p> <b>E</b> 90 120 <b>SE</b> 150 <b>S</b> 180 210 <b>SW</b> 240  <b>156°SE (T) LAT: 47.110546 LON: -101.489836 ±13ft ▲ 2283ft</b>  09 May 2024, 11:50:32 </p>	<p>Photo #: 3</p> <p>Direction: Southeast</p> <p>Description: Graders working in tandem to strip topsoil and transport to stockpile on east side of site.</p> <p>Observers: Peterson/Calkins</p> <p>Date: 05/9/2024</p> <p>Latitude: 47.110546</p> <p>Longitude: -101.489836</p>
 <p> <b>N</b> 30 0 30 <b>NE</b> 60 <b>E</b> 90 120 <b>SE</b> 150  <b>64°NE (T) LAT: 47.110823 LON: -101.487023 ±16ft ▲ 2282ft</b>  09 May 2024, 11:53:50 </p>	<p>Photo #: 4</p> <p>Direction: Northeast</p> <p>Description: Silt fence being installed along north side of laydown yard site.</p> <p>Observers: Peterson/Calkins</p> <p>Date: 05/9/2024</p> <p>Latitude: 47.110823</p> <p>Longitude: -101.487023</p>



## On-Site Photographs


## 200MW Oliver Wind IV Energy Center Project- Oliver County

<p>NE E SE S</p> <p>80 60 90 120 150 180 210</p> <p>☀ 124°SE (T) LAT: 47.109006 LON: -101.487076 ±13ft ▲ 2278ft</p>  <p>09 May 2024, 12:01:27</p>	<p>Photo #: 5</p> <p>Direction: Southeast</p> <p>Description: Grader stockpiling removed topsoil along east side of laydown yard site.</p> <p>Observers: Peterson/Calkins</p> <p>Date: 05/9/2024</p> <p>Latitude: 47.109006</p> <p>Longitude: -101.487076</p>
<p>NW N NE E</p> <p>00 330 0 30 60 90 120</p> <p>☀ 34°NE (T) LAT: 47.110029 LON: -101.489735 ±13ft ▲ 2275ft</p>  <p>09 May 2024, 12:07:11</p>	<p>Photo #: 6</p> <p>Direction: Northeast</p> <p>Description: Graders removing topsoil to depth where subsoil layer appears on west end of laydown yard site.</p> <p>Observers: Peterson/Calkins</p> <p>Date: 05/9/2024</p> <p>Latitude: 47.110029</p> <p>Longitude: -101.489735</p>



## On-Site Photographs

## 200MW Oliver Wind IV Energy Center Project- Oliver County

	<p>Photo #: 7</p> <p>Direction: North</p> <p>Description: Subsoil layer starting to appear after topsoil was removed along west end of laydown yard site.</p> <p>Observers: Peterson/Calkins</p> <p>Date: 05/9/2024</p> <p>Latitude: 47.110454</p> <p>Longitude: -101.489630</p>
	<p>Photo #: 8</p> <p>Direction: Southeast</p> <p>Description: Bulldozers removing topsoil and graders transporting removed topsoil to stockpiles on east side of laydown yard site.</p> <p>Observers: Peterson/Calkins</p> <p>Date: 05/9/2024</p> <p>Latitude: 47.111000</p> <p>Longitude: -101.489658</p>



## On-Site Photographs

## 200MW Oliver Wind IV Energy Center Project- Oliver County

<div> <div> <div>E</div> <div>SE</div> <div>S</div> <div>SW</div> </div> <div> <div>60</div> <div>90</div> <div>120</div> <div>150</div> <div>180</div> <div>210</div> <div>240</div> </div> </div> <div> <div> <div>☼</div> <div>153°SE (T)</div> <div>LAT: 47.111119</div> <div>LON: -101.489552 ±13ft</div> <div>▲ 2283ft</div> </div> </div> <div>  <div>10 May 2024, 10:33:12</div> </div>	<p>Photo #: 9</p> <p>Direction: Southeast</p> <p>Description: Bulldozers, scrapers, and graders removing remaining topsoil from laydown yard site.</p> <p>Observers: Peterson/Calkins</p> <p>Date: 05/10/2024</p> <p>Latitude: 47.111119</p> <p>Longitude: -101.489552</p>
<div> <div> <div>NE</div> <div>E</div> <div>SE</div> <div>S</div> </div> <div> <div>30</div> <div>60</div> <div>90</div> <div>120</div> <div>150</div> <div>180</div> <div>210</div> </div> </div> <div> <div> <div>☼</div> <div>119°SE (T)</div> <div>LAT: 47.110965</div> <div>LON: -101.489868 ±13ft</div> <div>▲ 2292ft</div> </div> </div> <div>  <div>10 May 2024, 10:33:57</div> </div>	<p>Photo #: 10</p> <p>Direction: Southeast</p> <p>Description: Topsoil pile on east side of laydown yard site.</p> <p>Observers: Peterson/Calkins</p> <p>Date: 05/10/2024</p> <p>Latitude: 47.110965</p> <p>Longitude: -101.489868</p>



