

Reclamation and Revegetation Inspection Report

Emmons-Logan Wind Energy Center

Emmons-Logan Wind, LLC

ND PSC Case No. PU-18-280

Prepared for:

North Dakota Public Service Commission
Public Utilities Division
State Capitol
600 East Boulevard – Dept. 408
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Executive Summary

The State of North Dakota, acting through its North Dakota Public Service Commission (Commission), Division of Public Utilities, has contracted Keitu Engineers & Consultants, Inc. (Keitu) to perform consulting services for a Reclamation and Revegetation Inspection. This report addresses the Orders established by the Commission and issues established in Case No. PU-18-280.

The Emmons-Logan Wind Energy Center (Project) is a wind energy conversion facility within a Project area of approximately 28,097 acres of land in Emmons and Logan Counties, North Dakota. The Project consists of 102 turbines with a name-plate capacity of 216.1 megawatts (“MW”). The Project includes three models of turbines, consisting of 61 GE 1.715 MW 80m HH, 20 GE 2.72 MW 80m HH, and 21 GE 2.72 MW 90m HH turbines. A transformer at each turbine site steps up the voltage to 34.5 kV and is transmitted through an underground collection system to the collector substation where the voltage is stepped up from 34.5 kV to 230 kV transmission line voltage for interconnection to the transmission grid. Additional facilities associated with the Project include access roads, underground electrical collection systems, collection substation, an operation and maintenance building, meteorological evaluation towers, and an Aircraft Detection Lighting System (ADLS).

The site was visually inspected on September 26, 2023 by Keitu staff. It appears to be returned as near as practical to preconstruction conditions at the time of visit.

Overall, the project was very well-maintained, secured, and in good condition. Keitu listed an item to be addressed at the Commission’s discretion in the Recommendations section of this report. If the recommendation is followed, the Project should continue to be as near as practical to pre-construction conditions.

Introduction

The Project was approved in February, 2019 and construction began in May, 2019. Construction for the Project was completed in November, 2019 with the exception of the ADLS which was commissioned in February, 2020. The Project is operated by Emmons-Logan Wind, LLC. Emmons-Logan Wind, LLC is a wholly owned, indirect subsidiary of NextEra Energy Resources, LLC. The Project is a wind energy conversion facility consisting of 102 wind turbine and associated facilities. The Project's wind turbines consist of three models of GE turbines; 61 GE 1.715 MW 80m HH, 20 GE 2.72 MW 80m HH, and 21 GE 2.72 MW 90m HH turbines. The 102 turbines have a name-plate capacity of 216.1 MW.

The Project's generated power will interconnect to the electrical grid via the Emmons-Logan Wind 230 kV Transmission Line, which was constructed concurrently to the Project. Emmons-Logan Wind, LLC submitted a separate application to the Commission for a Certificate of Site Compatibility and Route Permit for the 230 kV transmission line.

The Project is under the jurisdiction of the North Dakota Public Service Commission, which issued its Certificate of Corridor Compatibility No. 57 for Case No. PU-18-280 on February 6, 2019.

Purpose and Scope of Inspection

The North Dakota Energy Conversion and Transmission Facility Act (North Dakota Century Code Chapter 49-22) authorizes the Public Service Commission to determine that the location, construction, and operation of jurisdictional energy conversion and transmission facilities will produce minimal adverse effects on the environment and welfare of the citizens of North Dakota. Construction Inspections ensure the Project is constructed in compliance with siting laws, rules, and the applicable Commission Order Amending Certificate and Permit (Order).

The Commission retained Keitu Engineers & Consultants, Inc. (Keitu) to complete a Reclamation and Revegetation Inspection of the Project. The inspection process included a review of the Consolidated Application for Certificate of Corridor Compatibility and Route Permit (Application), Order, Certification Relating to Order Provisions (Certification), and other applicable documents to determine Project-specific siting and construction requirements; a site visit and inspection of facilities; documentation of compliance; and a report summarizing findings. This report includes, but is not limited to, site visit observations, documentation of compliance deficiencies, and a summary site conditions.

Methods

Keitu reviewed North Dakota siting laws and rules, the Application, Certification, and the Order for the Project to identify what Project-specific documentation was required for compliance. Keitu then reviewed Project documents in the PSC Online Case Search to identify those siting

laws, rules, and Application and Order assertions that already had written verification, those that still required documentation, and those that required physical site verification.

Keitu Staff visited the Project area on September 26, 2023 to visually inspect the site. Digital photographs were taken showing typical Project infrastructure. The Project was in operation at the time of visit.

As-Built Inspection Follow-Up

An As-Built inspection was conducted on March 5, 2021 by Keitu Staff. During this inspection it was deemed by Keitu staff that the Project was constructed in compliance with the siting laws, siting rules, and applicable Commission Orders.

Observations

Project areas occurring in crop lands appeared to be returned to pre-construction conditions at the time of visit. Crop density appeared to be similar to areas adjacent to the Project area. Portions of the Project occurring in range or pasture land had approximately 80-100% ground cover, but were mostly weeds and nonnative species. Even though they were undesirable species, the disturbed areas appeared to be stabilized.

Recommendations

1. Continual maintenance should be done to encourage the revegetation of desirable species.

Conclusion

Overall, the Project appeared to be constructed as designed with minimal impacts to the surrounding environment. The Project site is in good condition and is well maintained. The Project's ground cover is as near as practical to preconstruction conditions, but some areas are populated with undesirable plant species.

Management Review

The services performed by Keitu and its staff for this project have been conducted in a manner consistent with the degree of care and technical skill appropriately exercised by professionals currently practicing in this area under similar time and budget constraints.

Recommendations and findings contained in this report represent our professional judgment and are based upon available information and technically accepted practices at the present time and location. Other than this, no warranty is implied or expressed.



Jaimee Antognazzi, Operations Manager

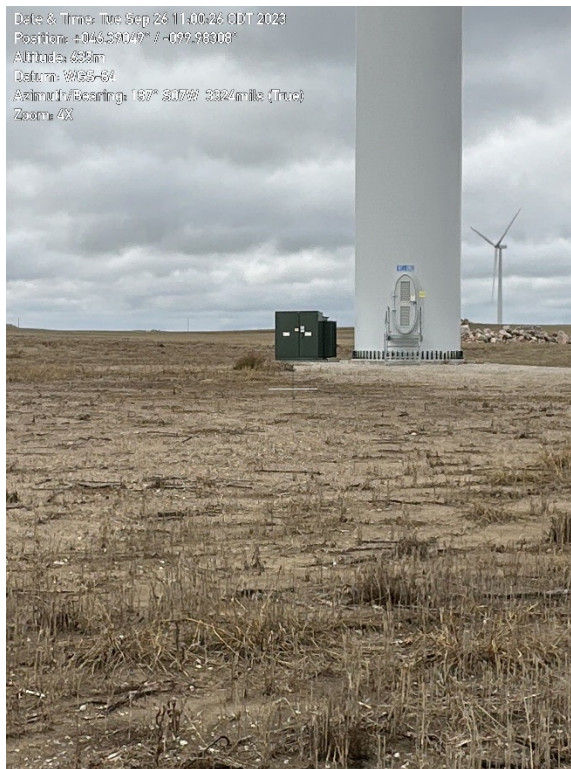
10/23/2023

Date

Report Photo #1: Established Vegetation



Report Photo #2: Limited Vegetation Around Turbine and Access Road



Report Photo #3: Established in Cropland



Report Photo #4: In Cropland Some Undesirable Vegetation



Report Photo #5: Established Vegetation



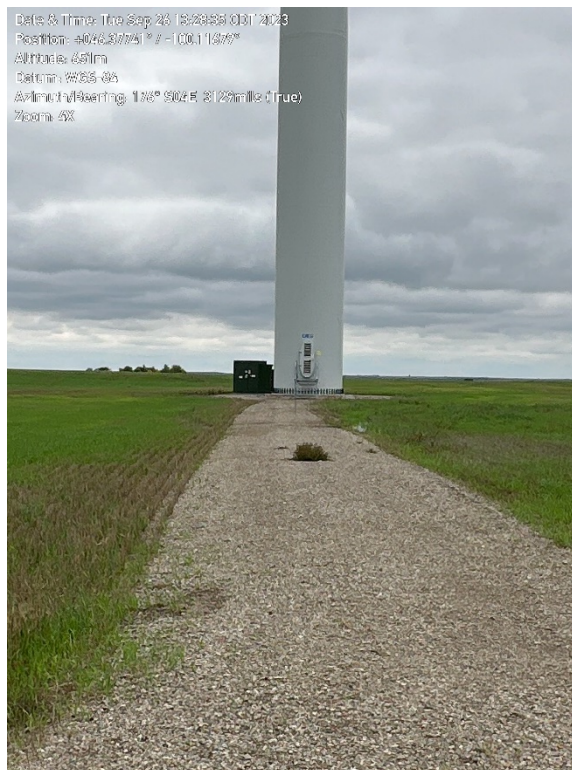
Report Photo #6: Established Vegetation on Cropland



Report Photo #7: Established Vegetation



Report Photo #8: Established Vegetation



Project Photo Location Map:

