

As-Built Inspection Report

Brady Wind Energy Center - Stark County

Brady Wind, LLC

ND PSC Case No. PU-15-690

Prepared for:

North Dakota Public Service Commission
Public Utilities Division
State Capitol
600 East Boulevard – Dept. 408
Bismarck, ND 58505-0480

Table of Contents

EXECUTIVE SUMMARY	1
INTRODUCTION	2
PURPOSE AND SCOPE OF INSPECTION	2
ORDERS	3
CERTIFICATION	5
CONCLUSIONS	6
MANAGEMENT REVIEW	6

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 As-Built Siting Inspections. This report addresses the Orders established by the Commission and issues established in Case No. PU-15-690.

The Brady Wind Energy Center is located in Stark County, North Dakota. The Center is owned and operated by Brady Wind, LLC (Brady Wind). Construction for the Project began in June 2016 and was completed in November 2016. The purpose of the As-Built Inspection was to ensure the Project was constructed in compliance with the siting laws, rules, and the applicable Commission Order for the Project. Prior to the Construction Inspection, Keitu reviewed all Project documents to identify any and all aspects requiring site verification.

The site was visually inspected on April 17, 2017 by Keitu staff. The project was very well-maintained, secured, and in good condition. During an August 16, 2016 Construction Inspection an area was noted to have topsoil and subsoil mixing. During the As-Built Inspection, the area appeared to have been properly remedied and no evidence of mixing remained. This area will be inspected once again during the Reclamation and Revegetation Inspection. Overall, the Project appeared to be constructed as planned with numerous efforts to minimize impacts and in compliance with the siting laws, siting rules, and Commission Orders.

Introduction

The Brady Wind Energy Center (Project) was approved and constructed in 2016. The Project is operated by Brady Wind, LLC (Brady Wind). The Project is a wind energy conversion facility in Stark County, North Dakota. The wind project consists of 87 turbines generating up to 150 megawatts. The Project and associated facilities permanently impact approximately 110 acres. The Project is under the jurisdiction of the North Dakota Public Service Commission (Commission), which issued its Order Amending Certificate and Permit for Case No. PU-15-690 on June 16, 2016.

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 an As-Built Construction Inspection of the Project. The inspection process included a review of the Application for Amended Corridor Certificate 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 of issues that should be addressed for the Project to be considered complete and in full compliance.

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 April 17, 2017, to visually inspect the site. Digital photographs were taken showing typical Project infrastructure and documenting any problem areas (starting page 7). The project was in operation at the time of visit.

Orders

The following section includes discussion of a list of components of the Project that were asserted in the Order which could be documented during the As-Built Inspection to verify compliance with siting laws, rules and the Order for the Project, via either written documentation or physical site verification. Included are detailed findings and observations from Keitu personnel involved in the As-Built Inspection for the Project.

- 1. Certificate of Site Compatibility for an Energy Conversion Facility No. 48 is issued to Brady Wind, LLC for the construction, operation and maintenance of an energy conversion facility known as the Brady Wind Energy Center corresponding to the Project area depicted in Late Filed Exhibit No. 14.**

On June 16, 2016 a Certificate of Site Compatibility for an Energy Conversion Facility No. 48 was issued with the Findings of Fact, Conclusions of Law and Order (Docket #122) for Brady Wind, LLC Brady Wind Energy Center – Stark County, Siting Application, Case No. PU-15-690.

Order #1 is complete.

- 2. Within the permitted area, Brady Wind is authorized to site and construct up to 150 megawatts within the designated area consisting of up to 87 wind turbines in proposed and alternate locations, as identified in Late Filed Exhibit No. 14, 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.**

During the As-built Inspection, it appeared Brady Wind followed the Order Specifications relating to the construction of facilities associated with the project.

Order #2 is complete.

- 3. Brady Wind shall file with the Commission a copy of the SHPO concurrence letter for architectural history when received.**

The SHPO concurrence letter (Docket #134) was filed with the Commission by Brady Wind on June 17, 2016.

Order #3 was followed.

- 4. If modifications are made to the Project layout, Brady Wind shall complete a Class III cultural resource survey for archeology and architectural history resources 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.

On October 5, 2017 Brady Wind filed a SHPO concurrence letter (Docket #160) regarding a site modification in an area that was previously un-surveyed.

Order #4 was followed.

- 5. If modifications are made to the Project layout, Brady Wind shall complete a wetland delineation of any previously un-surveyed areas affected by Project related activities, as necessary, and file the report with the Commission.**

It did not appear that any project modifications took place that would have required additional wetland delineations.

Order #5 was followed.

- 6. In the event Project modifications occur that are not covered by its current sound analysis, Brady Wind shall conduct a sound analysis and file a report with the Commission to ensure that the Project complies with the Commission's Avoidance Area Sound Requirement.**

It did not appear that any Project modifications took place that were not covered under the current sound analysis.

Order #6 was followed.

- 7. Brady Wind 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. In the event Project modifications occur that are not covered by its current shadow flicker analysis, Brady Wind shall conduct a shadow flicker analysis and file a report with the Commission to ensure this requirement is met.**

It did not appear that any Project modifications took place that were not covered under the current shadow flicker analysis.

Order #7 was followed.

- 8. Brady Wind shall implement the eagle-related measures set forth in the findings above.**

On September 14, 2016 filed a Wildlife Conservation Strategy with the Commission. (Docket #154) This document describes the Project's implementation of the eagle-related measures.

Order #8 was followed.

9. The March 4, 2016, Certification Relating to Order Provisions - Energy Conversion Facility Siting, with accompanying Tree and Shrub Mitigation Specifications are incorporated by reference and attached to this Order.

On April 21, 2014 Brady Wind filed the Tree and Shrub Inventory and Mitigation/Replacement Plan for the Project (Docket # 173).

Order #9 was followed.

Certification

The following section includes discussion of relevant items included in the Certification attached by reference to original Order (Docket #122 in Case No. PU-15-690). This Certification was also reviewed with Brady Wind and a Commission representative during the preconstruction conference. As noted in the preconstruction conference, not all original 38 certification points are relevant to the Brady Wind Energy Center Project.

1. Certification Point 8 – Preconstruction Conference

A preconstruction meeting was held to ensure all contractors fully understand the conditions set forth in the Order. The preconstruction conference (Docket #133) was held on June 16, 2016. In attendance was Jerry Lein, representing the PSC, as well as representatives from Brady Wind and Keitu.

Certification Point #8 was followed.

2. Certification Point 10 – Beginning of Topsoil Removal

Keitu staff was on site during initial topsoil removal. Keitu’s findings were compiled in a Topsoil Inspection Report filed on July 22, 2016 (Docket #145).

Certification Point #10 was followed.

3. Certification Point 11 – Monthly Progress Reports

Brady Wind submitted a notice of intent to commence construction on June 17, 2016 (Docket #133). During construction, Brady Wind submitted progress reports each week for the duration of the Project.

Certification Point #11 was followed.

4. Certification Point 33 – As-built Drawings

Brady Wind submitted as-built surveys to the Commission on February 22, 2017 (Docket #172).

Certification Point #33 was followed.

Conclusions

Overall, the Project appeared to be constructed as designed with minimal impacts to the surrounding environment. The Project site was in good condition, well maintained, and appeared to be constructed in compliance with the siting laws, siting rules, and applicable Commission Orders.

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

5/15/17

Date

Report Photo #1: String Road



Report Photo #2: Turbine 49



Report Photo #3: String Road to Turbine 54



Report Photo #4: Erosion Control Structure in String Road



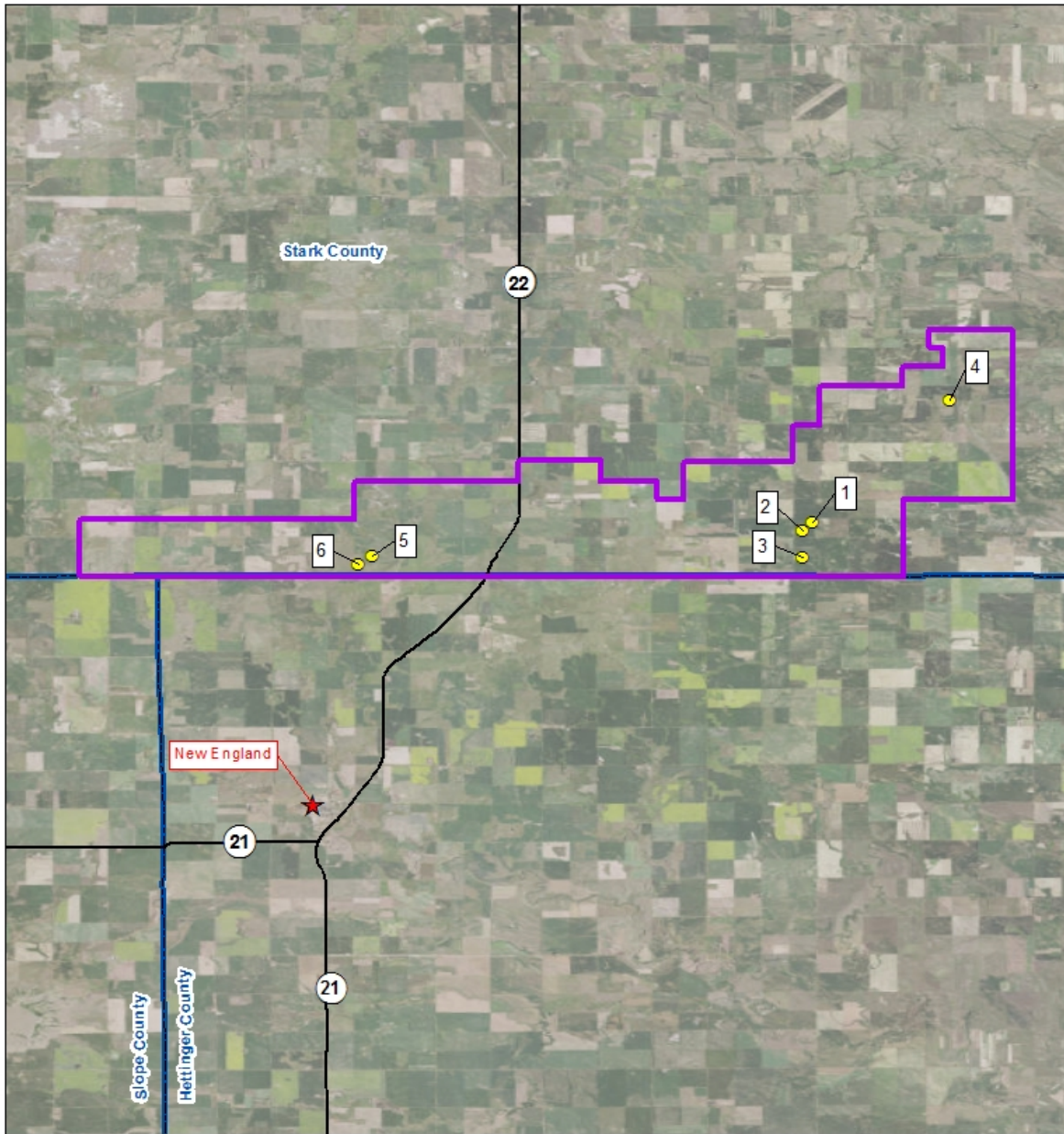
Report Photo #5: Straw Wattles along String Road



Report Photo #6: Turbine 28



Site Location – Brady Wind Energy Center – Stark County



<ul style="list-style-type: none">● Photo Point★ Town— State Highway Proposed Project Boundary County Boundary	<p>N</p> <p>0 2.5 5 Miles</p>	<p>ND PSC Case No. PU-15-690 Brady Wind, LLC Brady Wind Energy Center Stark County, North Dakota</p>
---	----------------------------------	--