

As-Built Inspection Report

Brady II Wind Energy Center - Stark County

Brady Wind II, LLC

ND PSC Case No. PU-16-42

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 As-Built Siting Inspections. This report addresses the Orders established by the Commission and issues established in Case No. PU-16-42.

The Brady II Wind Energy Center (Project) is located in Stark and Hettinger Counties, North Dakota. The Project is owned and operated by Brady Wind II, LLC (Brady Wind). Construction for the Project began in August 2016 and was completed in December 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 July 21, 2017 by Keitu staff. The project was very well-maintained, secured, and in good condition. During a November 22, 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. During the As-Built Inspection, it appears that some string roads and drainage ditches have water erosion damage from recent rain events. 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 II Wind Energy Center (Project) was approved and constructed in 2016. The Project is operated by Brady Wind II, LLC (Brady Wind). The Project is a wind energy conversion facility in Stark County, North Dakota. The wind project consists of 72 turbines generating up to 150 megawatts. The Project and associated facilities permanently impact approximately 17,762 acres in Hettinger County and 2,554 acres in Stark County. 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-16-42 on July 6, 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 July 21, 2017, to visually inspect the site. Digital photographs were taken showing typical Project infrastructure and documenting any problem areas (starting page 8). 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. Brady II will file with the Commission a revised Project footprint to exclude parcels upon which Project facilities will not be constructed.**

On July 29, 2016, Brady Wind filed Revised Project Footprint Map (Docket #87) to the Commission.

Order #1 is complete.

- 2. Certificate of Site Compatibility Number 50, is issued to Brady Wind II, LLC designating a site for the construction, operation, and maintenance of an energy conversion facility in Hettinger and Stark Counties North Dakota, to be known as the "Brady II Wind Energy Center". The designated site is depicted by the revised Project footprint to filed with the Commission.**

On July 6, 2016 a Certificate of Site Compatibility for an Energy Conversion Facility No. 50 was issued with the Findings of Fact, Conclusions of Law and Order (Docket #72) for Brady Wind, LLC Brady II Wind Energy Center – Stark County, Siting Application, Case No. PU-16-42.

Order #2 is complete.

- 3. Brady II is authorized construct up to 72 wind turbines producing a total nameplate capacity of 150 megawatts within the designated site, along with associated access roads, underground electrical collection systems and communications cables, and one permanent and four temporary meteorological evaluation towers.**

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

Order #3 is complete.

- 4. In the event the Project layout is modified, Brady II shall complete a Class III cultural resource survey for any previously un-surveyed areas affected by Project-related activities, in accordance with NDSHPO guidance, and shall submit cultural resource findings to NDSHPO for review and obtain and file a copy of NDSHPO's response with the Commission prior to beginning construction in affected areas.**

The SHPO concurrence letter (Docket #77) was filed with the Commission by Brady Wind on July 6, 2016. On November 14, 2016, Brady Wind filed a SHPO concurrence letter (Docket #110) regarding a site modification in an area that was previously un-surveyed. On December 16, 2016 Brady Wind filed a SHPO concurrence letter (Docket #117) regarding a site modification in an area that was previously un-surveyed.

Order #4 was followed.

- 5. In the event the Project layout is modified, Brady II 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.**

On November 16, 2016 Brady Wind filed a Wetland Addendum (Docket #111) regarding site modification in an area that was previously un-surveyed.

Order #5 was followed.

- 6. In the event Project modifications occur that are not covered by its existing acoustic analysis, Brady II shall conduct a revised acoustic analysis and file the results of that analysis with the Commission.**

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

Order #6 was followed.

- 7. Brady II shall locate turbines such that shadow flicker at any currently inhabited residence is 30 hours or less per year, unless otherwise agreed to by the landowner.**

On June 7, 2016, Brady Wind filed a Shadow Flicker Impact Analysis (Docket #53) with the Commission. This document concludes the Project’s impact is less than 30 hours per year for all but two residences. The two residences are participating in the Project.

Order #7 was followed.

- 8. In the event Project modifications occur that are not covered by its existing shadow flicker analysis, Brady II shall conduct a revised shadow flicker analysis and file the results of that analysis with the Commission.**

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

Order #8 was followed.

9. Brady II shall obtain, and file copies with the Commission, NDSHPO responses regarding the field survey report of architectural resources prior to beginning construction of the Project.

The SHPO concurrence letter (Docket #77) was filed with the Commission by Brady Wind on July 6, 2016.

Order #9 was followed.

10. Brady II shall implement the eagle-related measures set forth in this Order.

On November 15, 2016 filed a Wildlife Conservation Strategy with the Commission. (Docket #109) This document describes the Project’s implementation of the eagle-related measures.

Order #10 was followed.

11. Brady II shall file with the Commission copies of its Bird and Bat Conservation Strategy and its Wildlife Conservation Strategy.

On November 15, 2016 filed a Wildlife Conservation Strategy with the Commission. (Docket #109) This document describes the Project’s implementation of methods to minimize and avoid impact to bird and bat populations.

Order #11 was followed.

12. The June 3, 2016 Certification Relating to Order Provisions - Wind Energy Conversion Facility Siting with accompanying Tree and Shrub Mitigation Specifications is incorporated by reference and attached to this Order.

On November 15, 2016 filed a Tree and Shrub Inventory and Mitigation/Replacement Plan with the Commission (Docket #120). This document describes the Project’s plan to replace trees and shrubs in a 2 for 1 replacement and substituting invasive species with native species.

Order #12 was followed.

13. To the extent that there are any conflicts or inconsistencies between Brady II’s application in this proceeding and the Certification, the Certification provisions control.

There does not appear to be any conflicts between Brady II application and the certification.

Order #13 was followed.

Certification

The following section includes discussion of relevant items included in the Certification attached by reference to original Order (Docket #72 in Case No. PU-16-42). 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 II 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 #84) was held on July 12, 2016. In attendance was Julie Prescott, 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 September 2, 2016 (Docket #92).

Certification Point #10 was followed.

3. Certification Point 11 – Monthly Progress Reports

Brady Wind submitted a notice of intent to commence construction on July 22, 2016 (Docket #84). During construction, Brady Wind submitted progress reports each week for the duration of the Project.

Certification Point #11 was followed.

4. Certification Point 35 – As-built Drawings

Brady Wind submitted as-built surveys to the Commission on March 6, 2017 (Docket #119).

Certification Point #35 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

7/28/2017

Date

Report Photo #1: String Road with water erosion



Report Photo #2: Turbine 69 with small water erosion rills



Report Photo #3: String Road to Turbine 31



Report Photo #4: Erosion Control Structure on hill at Turbine #5



Report Photo #5: Straw Wattles at Turbine #11



Report Photo #6: Turbine 62 with evidence of sheet water erosion



Report Photo #7: Water erosion rills at entrance to string road for Turbines #52 & #53



Report Photo #8: String road for Turbine #24, #25 and #28



Site Location – Brady II Wind Energy Center – Stark County

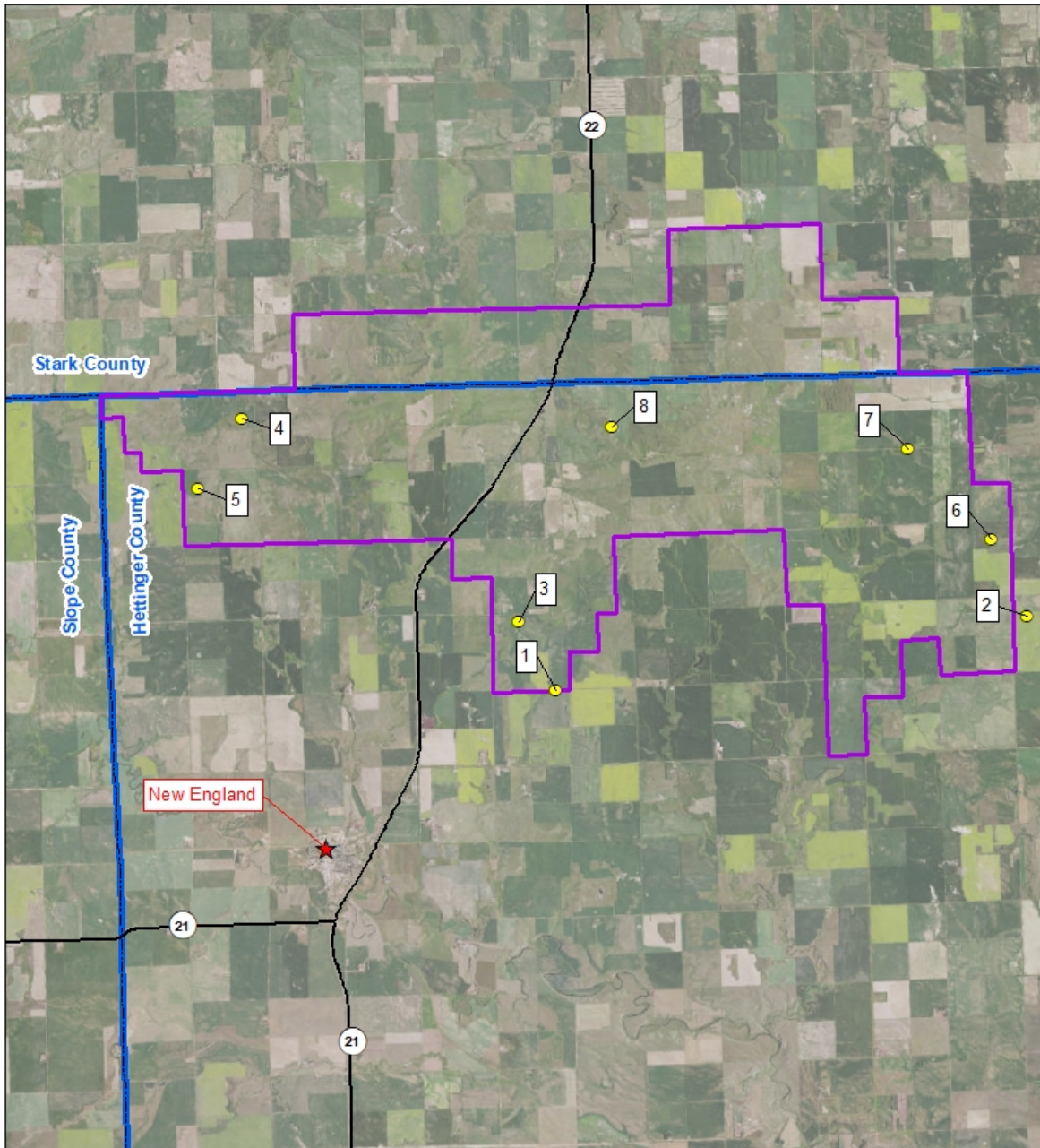


Photo Point		ND PSC Case No. PU-16-042 Brady Wind, LLC Brady II Wind Energy Center Stark and Hettinger Counties, North Dakota
Town		
State Highway	 	
Proposed Project Boundary		
County Boundary		