

As-Built Inspection Report

Clean Energy #1 Wind Project

ALLETE Clean Energy, Inc.

ND PSC Case No. PU-11-662

Prepared for:

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



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Keitu Engineers & Consultants, Inc.

October 2020

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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 an As-Built Siting Inspection. This report addresses the Orders established by the Commission and issues established in Case No. PU-11-662.

The Clean Energy #1 Wind Project (Project) encompasses approximately 12,000 acres in Morton and Mercer counties in North Dakota. The Project can generate up to 100 megawatts of electricity, utilizing up to 43 wind turbines for power generation. Associated permanent facilities include access roads, an electrical collection system and one meteorological tower. Construction for the Project began in December of 2015 and was completed in December of 2019. 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 inspection, Keitu reviewed all Project documents to verify any and all aspects requiring site verification.

The site was visually inspected on September 10, 2020 by Keitu staff. The Project was well-maintained, secured, and in good condition. During the As-Built Inspection, the areas appeared to have been properly restored. Vegetation had not be reestablished in all areas due to drought conditions during the 2020 growing season. Overall, the Project appeared to be constructed as planned with numerous efforts to minimize impacts and to stay in compliance with the siting laws, siting rules, and Commission Orders.

Reclamation is still occurring onsite, but to date no electronic or paper copy of the design specifications for the construction of the energy conversion facility showing the location of the energy conversion facility as built has been submitted.

Introduction

The Project was approved in April, 2012 and construction began in November, 2018. Construction for the Project was completed in December, 2019 and is operated by ALLETE Clean Energy (ACE). The Project consists of 43 wind turbine generators totaling approximately 106 MW of generating capacity. The Project is under the jurisdiction of the North Dakota Public Service Commission, which issued its Certificate of Site Compatibility for Energy Conversion Facility, Third Amended Certificate #30 and Permit for Case No. PU-11-662 on April 11, 2019. ACE also operates half of a 230 kv substations which acts as a generator outlet for the wind farm.

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 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 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 September 10, 2020 to visually inspect the site. Digital photographs were taken showing typical Project infrastructure. 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.

On March 21, 2012, the Commission deemed the application complete conditioned on the filing of final wind turbine locations one week before the scheduled public hearing, and issued a Notice of Filing and Notice of Hearing, scheduling a public hearing for May 4, 2012. On May 4, 2012, the public hearing was held as scheduled.

- 1. Certificate of Site Compatibility for an Energy Conversion Facility No. 30 is issued to ALLETE Clean Energy, Inc. for the construction, operation, and maintenance of a wind energy facility known as Clean Energy #1 Wind Project in accordance with this order.**

Order #1 is complete.

- 2. The site, as proposed in the Application, is located in Mercer and Morton counties north of Glen Ullin, North Dakota, and is designated as the site for construction of the energy conversion facility.**

A representative of ALLETE Clean Energy signed the Certification Relating to Order Provisions – Energy Conversion Facility Siting binding ALLETE Clean Energy to requirements set forth by the Commission in its Order.

Order #2 was followed.

- 3. ALLETE Clean Energy is authorized to construct up to 50 wind turbines totaling up to 100 MW of total generating capacity in proposed and alternate locations, along with electric collection and communication lines, a project substation, operations and maintenance buildings, meteorological towers, access roads and other associated facilities identified in the application and at the May 4, 2012 public hearing.**

A total of 43 wind turbines were constructed along with electric collection lines, a project substation, an operations and maintenance building, access roads, and other associated facilities.

Order #3 was followed.

- 4. The April 23, 2012 Certification Relating to Order Provisions- Wind Energy Conversion Facility Siting (Hearing Exhibit 3), except as modified in accordance with Findings of Fact paragraph 38 above, is incorporated by reference and attached to this Order.**

Order #4 was followed.

Certification

The following section includes discussion of relevant items included in the Certification attached by reference to original Order. All certification points relevant to the As-Built Inspection Report are included.

- 1. Company understands and agrees that the Certificate of Site Compatibility will be issued by the Commission subject to the conditions and criteria set forth in Chapter 49-22 of the North Dakota Century Code and Chapter 69-06-08 of the North Dakota Administrative Code, and that Company shall be responsible for compliance with this order and conditions and criteria set forth in the applicable laws and rules.**

Certification Point #1 was followed.

- 2. Company agrees to hold a preconstruction conference prior to commencement of any construction, which must include a Company representative, its construction supervisor, and a representative of Commission Staff, to ensure that Company fully understands the conditions set forth in the Commission's order.**

On November 16, 2015, Mr. Jerry Lein from the PSC conducted a preconstruction conference with ALLETE Clean Energy. Mr. Lein and representatives of ALLETE discussed the PSC's Certification that is attached to the Order dated August 29, 2012. Weekly construction notification will be sent to the PSC and Carlson McCain and once initial construction is completed the notification will cease until construction resumes.

Certification Point #2 was followed.

- 3. Company agrees to comply with the rules and regulations of all other agencies having jurisdiction over any phase of the transmission facility including all city, township and county zoning regulations.**

Certification Point #3 was followed.

- 4. Company understands and agrees that it shall obtain all other necessary licenses and permits, and shall provide copies of all licenses and permits to the Commission prior to construction activity associated with the energy conversion facility that requires said license or permit.**

Certification Point #4 was followed.

5. **Company agrees to inform the Commission and the Commission’s third-party construction inspector of its intent to start construction on the energy conversion facility prior to the commencement of construction. Once construction has started, Company shall keep the Commission and the Commission’s third-party construction inspector updated of construction activities on a weekly basis.**

In 2015, the Company informed the PSC of its intent to begin construction. After a delay, in September of 2018, the Company informed in the PSC of its intent to resume construction activities for the Project. The Company completed weekly construction updates during active construction activities.

Company has complied with the applicable statues, rules, regulations, standards, and permits of other state or federal agencies to date. The Company’s Certificate of Corridor Compatibility or Route Permit was not found to have been suspended or revoked for failure to comply with the Commission’s order.

Certification Point #5 was followed.

6. **Company understands and agrees that the Certificate of Site Compatibility is subject to suspension or revocation and may, in an appropriate and proper case, be suspended or revoked for failure to comply with the Commission’s order, the conditions and criteria of the certificate or subsequent modification, or failure to comply with the applicable statutes, rules, regulations, standards, and permits of other state or federal agencies.**

Certification Point #6 as followed.

7. **Company agrees to maintain records that will demonstrate that it has complied with the requirements of the Commission’s order and the Certificate of Site Compatibility, and that it will preserve these records for Commission inspection at any reasonable time upon reasonable notice.**

Based on available information, Keitu’s opinion is that Certification Point #7 was followed.

8. **Company agrees to construct and operate the energy conversion facility in accordance with all applicable safety requirements.**

Based on available information, Keitu’s opinion is that Certification Point #8 was completed.

9. **Company agrees to construct and operate the energy conversion facility in the manner described in Company’s application, in any late filed exhibits, and supplemental materials, (Application). To the extent there are any conflicts or**

inconsistencies between Company’s Application and the provisions in this Certification Relating to Order Provisions, the Certification provisions control.

Based on available information, Keitu’s opinion is that Certification Point #9 was followed.

10. Company agrees to report promptly to the Commission the presence in the permit area of any critical habitat of threatened species, endangered species, bald eagles, or golden eagles that Company becomes aware of and which were not previously reported to the Commission.

Based on available information, Keitu’s opinion is that Certification Point #10 was completed.

11. Company understands and agrees that if any cultural resource mitigation plans must be submitted to the North Dakota State Historic Preservation Office and approved prior to the start of any fieldwork and construction activity in the affected area.

In November 2011 and March 2012, Beaver Creek Archeology (BCA) conducted a Class III Cultural Resource Inventory of the Project. BCA archaeologists identified thirteen previously unrecorded cultural resources. BCA recommended that all potentially eligible sites be avoided and flagged/staked off prior to construction. They also recommended that potentially eligible sites located close to linear project features be buffered 50 feet, and sites located close to turbine locations be buffered 100 feet, and that stakes/flags be placed along these buffer zones. During the field investigation, the site lead was not observed. BCA recommended that the site lead or ineligible site do no need to be avoided during construction as long as the Project is limited to the inventoried corridors outlined on the maps.

NDSHPO reviewed NDSHPO REF.: 12-1216 PSC “ACE Wind Energy Center: A Class III Cultural Resource Inventory, Mercer and Morton Counties, North Dakota,” and concurred with “No Historic Properties Affected” and “No Significant Sites Affected” determinations provided that the recommendations provided on the report.

Certification Point #11 was followed.

12. Company understands and agrees that if any cultural resource, paleontological site, archeological site, historic site, or grave site is discovered during construction, it must be marked, preserved and protected from further disturbances until a professional examination can be made by the State Historical Society, a report of such examination is filed with the Commission, and clearance to proceed is given by the Commission.

Based on available information, Keitu’s opinion is that Certification Point #12 was followed.

- 13. Company understands and agrees that all buried facility crossings of graded roads shall be bored unless the responsible governing agency specifically permits Company to open cut the road.**

In Keitu's opinion, certification Point #13 was followed.

- 14. Company understands and agrees that all pre-existing township and county roads and lanes used during construction must be repaired or restored to a condition that is equal to or better than the condition prior to the construction of the energy conversion facility and that will accommodate their previous use, and that areas used as temporary roads or working areas during construction must be restored to their original condition.**

Certification Point #14 was followed.

- 15. Company understands and agrees that construction must be suspended when weather conditions are such that construction activities will cause irreparable damage to roads or land, unless adequate protection measures approved by the Commission are taken.**

Certification Point #15 was followed.

- 16. During construction, at least 12 inches of topsoil, where available (or topsoil to the depth of cultivation, whichever is greater), over and along areas where facilities will be placed must be stripped and segregated from subsoil. Any area on which excavated subsoil will be placed must first be stripped of topsoil. After backfilling with subsoil is completed, any excess subsoil must be placed over the excavation area, blending the grade into existing topography. Topsoil must not be placed within the footprint of the facilities, and must be placed over areas containing topsoil.**

Company understands and agrees that where available, at least 12 inches of topsoil over and along trench areas, roadways, tower locations, and locations of associated facilities shall be stripped and shall be segregated from the subsoil and be replaced only after the subsoil is replaced. Any area on which excavated subsoil will be placed must first be stripped of topsoil. After backfilling with subsoil is completed, any excess subsoil must be placed over the excavation area, area blending the grade into existing topography.

In Keitu's opinion, Certification Point 16 was followed.

- 17. Company understands and agrees that it shall bury all underground collection and feeder lines to a depth of at least 48 inches to the top of the lines.**

Based on available information, Keitu’s opinion is that Certification Point #17 was followed.

- 18. Company understands and agrees that reclamation, fertilization, and reseeding is to be done according to the Natural Resources Conservation Service recommendations, unless otherwise specified by the landowner and approved by the Commission.**

The Project has been reclaimed and reseeded according to the Natural Resources Conservation Service recommendations; however, due to the dry growing season in 2020, some areas of the Project have not yet reached final stabilization.

Certification Point #18 was followed.

- 19. Company understands and agrees that its obligation for reclamation and maintenance of energy conversion facility tower locations, associated facilities, roadways, and rights-of-way will continue throughout the life of the energy conversion facility.**

Certification Point #19 was followed.

- 20. Company is aware that North Dakota law requires that all companies that own or operate electric generation of any size for the primary purpose of resale must comply with the standards of the National Electrical Safety Code in effect at the time of construction of the generation facility, and agrees to comply with that requirement.**

Based on available information, Keitu’s opinion is that Certification Point #20 has been followed.

- 21. Company agrees to comply with the Tree and Shrub Mitigation Specifications, attached.**

Based on available information, Keitu’s opinion is that Certification Point has been followed.

- 22. Company understands and agrees that it shall repair or replace all fences and gates removed or damaged during all phases of construction and operation of the proposed energy conversion facility.**

Certification Point #22 was followed.

- 23. Company understands and agrees that shall repair or replace all drainage tile broken or damaged as a result of construction and operation of the proposed energy conversion facility.**

Based on available information, Keitu’s opinion is that Certification Point #23 was followed.

24. Company understands and agrees that it shall work with landowners and residents to mitigate any increase in television and residential radio interference that results from the construction of the energy conversion facility.

Based on available information, Keitu's opinion is that Certification Point #24 was followed.

25. Company understands and agrees that staging areas or equipment shall not be located on land owned by a person other than Company unless otherwise negotiated with landowners.

Based on available information, Keitu's opinion is that Certification Point #25 was followed.

26. Company understands and agrees that it shall remove all waste that is a product of construction and operation, restoration, and maintenance of the site, and properly dispose of it on a regular basis.

Based on available information, Keitu's opinion is that Certification Point #26 was followed.

27. Company agrees that it shall, as soon as practicable upon completion of the construction of each wind turbine, restore the area affected by the activities to as near as is practicable to the condition as it existed prior to the beginning of construction.

The areas affected by the construction activities has been reclaimed and reseeded at the time of inspection. However, due to the dry conditions of the 2020 growing season, some areas had vegetation that had not been established after seeding.

Certification Point #27 was followed.

28. Company agrees that it shall provide, if requested, educational material for landowners within the site boundaries about the proposed energy conversion facility and any restriction or danger concerning the proposed energy conversion facility.

Based on available information, Keitu's opinion is that Certification Point #28 was followed.

29. Company understands and agrees that it shall provide any necessary safety measures for traffic control or to restrict public access to the energy conversion facility.

Based on available information, Keitu's opinion is that Certification Point #29 was followed.

30. Company understands and agrees that it shall advise the Commission of any extraordinary events which take place at the site of the energy conversion facility, including injuries to any person, the death of any threatened or endangered species,

a tower collapse, or a catastrophic turbine failure, within five business days of such event.

Based on available information, Keitu’s opinion is that Certification Point #30 was followed.

31. Company understands and agrees that it shall advise the Commission of the discovery of a large number of dead birds or bats on the site within five business days of such event.

Based on available information, Keitu’s opinion is that Certification Point #31 was followed.

32. Company understands and agrees that it shall implement a procedure for how complaints concerning the proposed energy conversion facility will be handled by Company.

Based on available information, Keitu’s opinion is that Certification Point #32 was followed.

33. Upon request, Company agrees to provide the Commission with engineering design drawings showing surveyed structure prior to construction.

Company agrees to provide the Commission with engineering design drawings showing surveyed structure and collection substation locations prior to construction.

Certification Point #33 was followed.

34. Company understands and agrees that it shall inform the Commission in writing of any plans to modify the energy conversion facility. Company understands and agrees to obtain written approval from the Commission prior to any modifications to the site plan or energy conversion facility, associated facilities, and roadway locations. Approval may be granted after notice and opportunity for hearing.

Based on available information, Keitu’s opinion is that Certification Point #34 was followed.

35. Company agrees to provide the Commission with both an electronic and a paper copy of the design specifications for the construction of the energy conversion facility showing the location of the energy conversion facility as built, and will provide this information within 3 months of the completion of the construction. Company also agrees to provide an electronic version of the as-built facility design specifications that can be imported into ESRI GIS mapping software within 3 months of the completion of the construction. This electronic map data must be referenced to the North Dakota coordinate system of 1983, North and/or South zones US Survey feet (NAD 83) UTM Zone 13N or 14N feet (NAD 83), or geographic coordinate system (WGS 84) feet. The

vertical data must be in the appropriate vertical datum for the coordinate system used. All submissions must specify the datum in which the data was developed.

Reclamation is still occurring onsite, but to date no electronic or paper copy of the design specifications for the construction of the energy conversion facility showing the location of the energy conversion facility as built has been submitted.

- 36. Company is aware that under North Dakota Century Code section 49-02-27 the Commission has rules for decommissioning of wind energy conversion facilities. Company agrees to comply with all decommissioning rules adopted by the Commission.**

Based on available information, Keitu’s opinion is that Certification Point #36 has been followed.

- 37. Company understands and agrees that the authorizations granted by the Certificate of Site Compatibility for the energy conversion facility are subject to modification by order of the Commission if deemed necessary to protect further the public or the environment.**

Certification Point #37 has been followed.

- 38. Company understands and agrees that in the event Company desires to construct, within any site granted by a Certificate of Site Compatibility in the this proceeding, an energy conversion facility that was not requested in Company’s application in this proceeding, Company shall apply for a Certificate of Site Compatibility for the facility.**

Based on available information, Keitu’s opinion is that Certification Point #38 has been followed.

- 39. Company shall notify the Commission, as soon as reasonably possible, if any damage, as defined by North Dakota Century Code Chapter 49-23, occurs to underground facilities during construction conducted under the certificate or permit issued in this proceeding. In the event of any damage to underground facilities, Company shall suspend construction in the vicinity of the damage until compliance with One-Call Excavation Notice System requirements under North Dakota Century Code Chapter 49-23 has been determined and clearance to proceed has been given by the Commission.**

Based on available information, Keitu’s opinion is that Certification Point #39 has been followed.

- 40. The certificate of site compatibility is subject to suspension or revocation and may, after hearing, be suspended or revoked for failure to comply with the Commission’s order, requirements of the One-Call Excavation Notice System under North Dakota**

Century Code Chapter 49-23, the conditions and criteria of the certificate or permit or subsequent modifications, or failure to comply with applicable statutes, or rules, regulations, standards and permits of other federal agencies.

Based on available information, Keitu’s opinion is that Certification Point #40 has been 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.

Reclamation is still occurring onsite, but to date no electronic or paper copy of the design specifications for the construction of the energy conversion facility showing the location of the energy conversion facility as built has been submitted.

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.



10/16/2020

Jaimee Antognazzi, Operations Manager

Report Photo #1: Operations and Maintenance building



☀ 324°NW (T) ● 46°58.898'N, 101°46.464'W ±32ft ▲ 2311ft



10 Sep 2020, 11:36:32

Report Photo #2: Wind Project substation operated by ACE

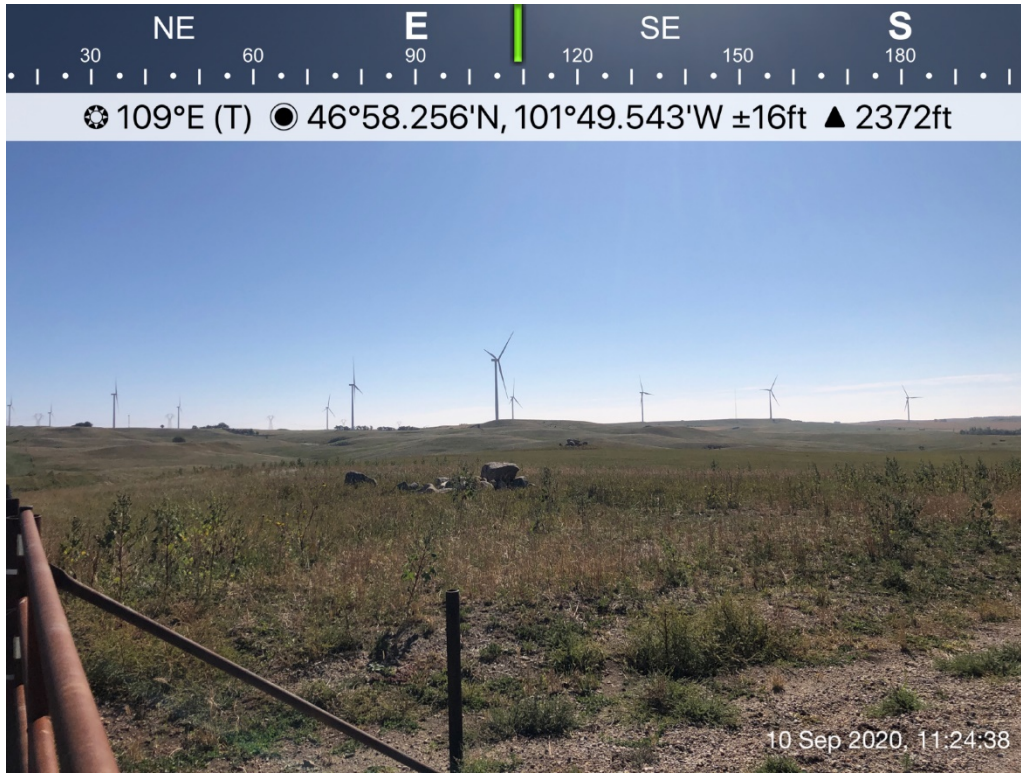


☀ 229°SW (T) ● 46°59.152'N, 101°45.862'W ±16ft ▲ 2307ft



10 Sep 2020, 11:33:25

Report Photo #3: Overview of turbine sites



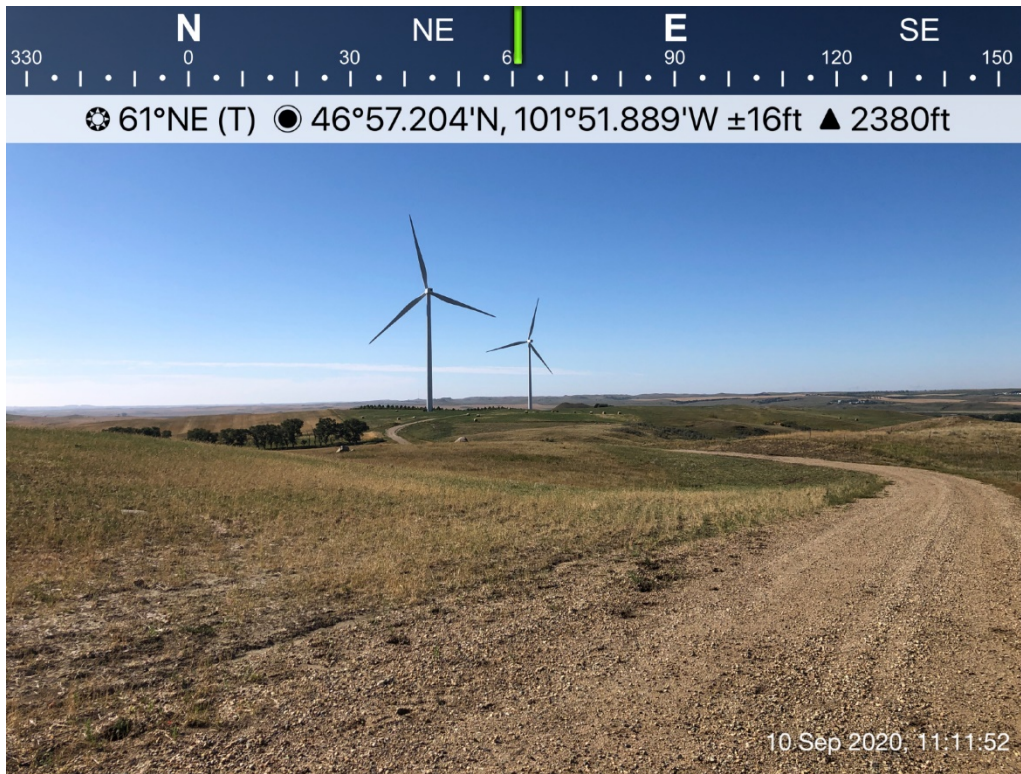
Report Photo #4: Turbine sites and grass seeded in Spring 2020



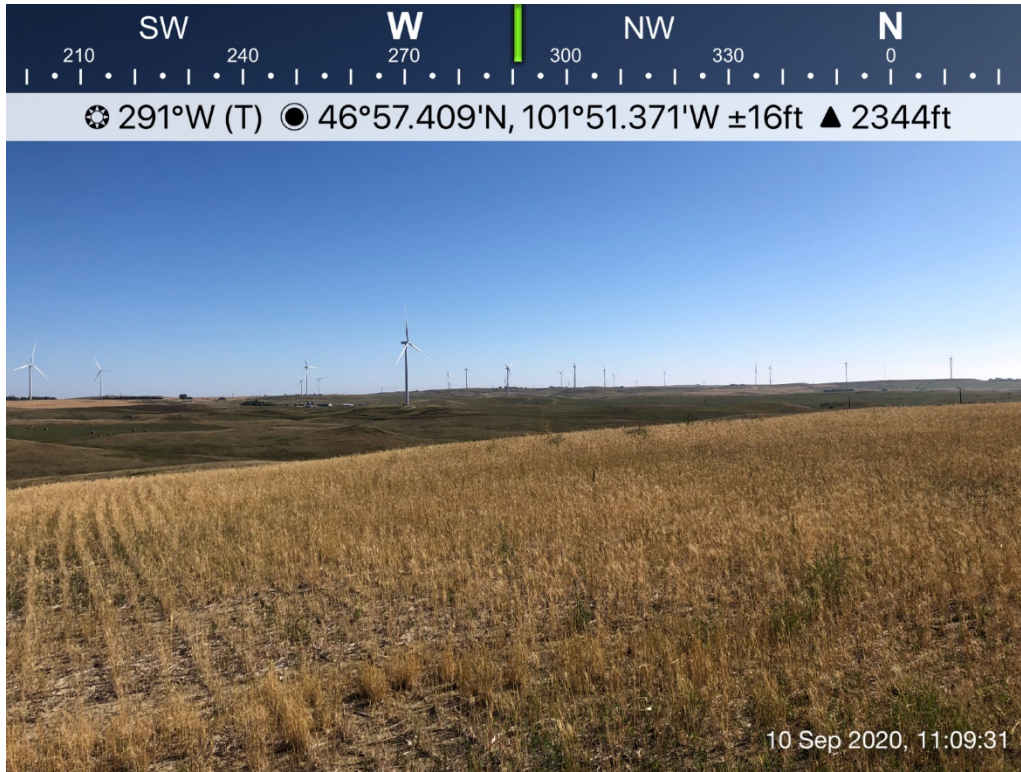
Report Photo #5: View of turbine sites and fence built by ACE



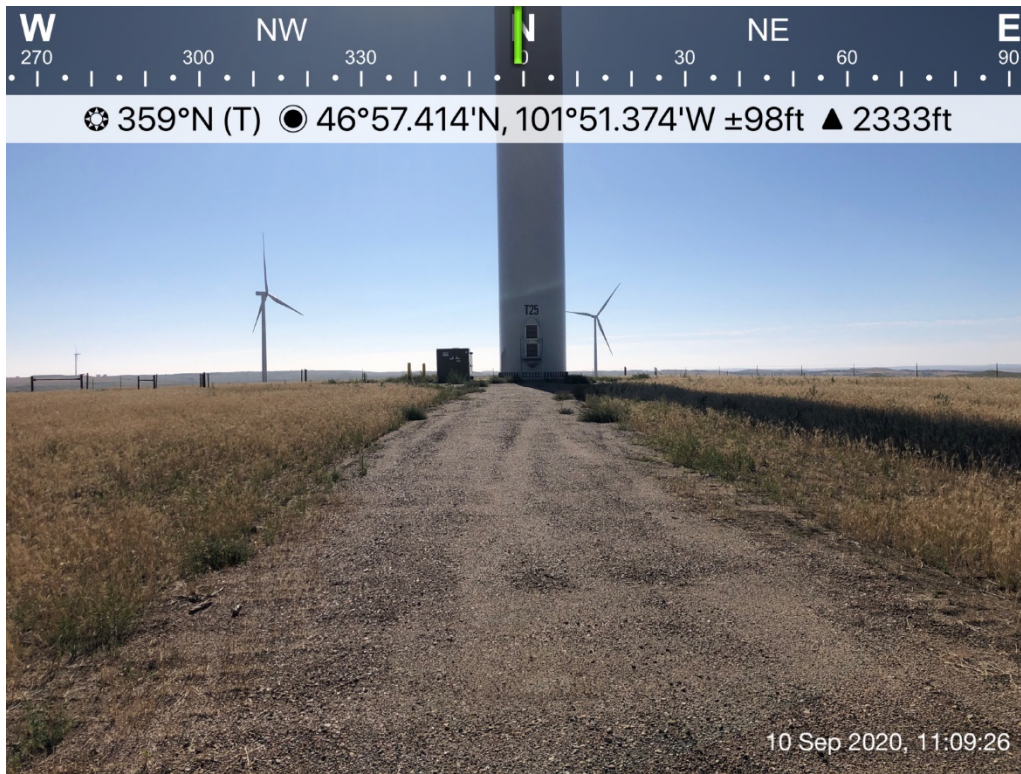
Report Photo #6: View of access roads and turbine sites



Report Photo #7: Overview of turbines



Report Photo #8: Turbine Site T-25



Project Map:

