

STATE OF NORTH DAKOTA
PUBLIC SERVICE COMMISSION

Bowman Wind, LLC
208.7 MW Bowman Wind Project – Bowman County
Siting Application

Case No. PU-21-121

FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER

February 8, 2023

Appearances

Commissioners Julie Fedorchak and Randy Christmann.

Mollie M. Smith and Bridget Duffus, Fredrikson & Byron, P.A., 200 South 6th Street, Suite 4000, Minneapolis, MN 55402, on behalf of the Applicant, Bowman Wind, LLC.

Brian Johnson, Special Assistant Attorney General, North Dakota Public Service Commission.

Kevin Pranis, 81 East Little Canada Road, St. Paul, MN 55117, on behalf of Laborers District Council of Minnesota and North Dakota (LIUNA).

Timothy J. Dawson, Administrative Law Judge, Office of Administrative Hearings, 2911 North 14th Street – Suite 303, Bismarck, ND 58503, as Procedural Hearing Officer.

Preliminary Statement

On March 30, 2021, Bowman Wind, LLC (Bowman Wind) filed an Application for a Certificate of Site Compatibility (Application) for a proposed wind energy conversion facility known as the Bowman Wind Project (Project) to be located in Bowman County, North Dakota.

On May 5, 2021, the North Dakota Public Service Commission (Commission) deemed the Application complete, conditioned on receipt at least 30 days prior to the hearing of the final site layout plan, including updated Figures 1 through 10 of the Application with the associated GIS shapefiles, and all updated studies, including updated sound, shadow flicker, and telecommunications studies. The Commission also issued a Notice of Filing and Notice of Hearing, scheduling a public hearing for June 24, 2021, at 9:00 a.m. Central Time (8:00 a.m. Mountain Time) at Bowman Lodge & Convention Center, 207 West Highway 12, Bowman, ND 58623.

On May 14, 2021, the North Dakota Geological Survey (NDGS) filed comments on the Project.

On May 20, 2021, North Dakota Game and Fish Department (NDGF) filed comments on the Project.

On May 24, 2021, Bowman Wind filed a letter requesting the public hearing be postponed and rescheduled in order to give Bowman Wind time to address a neighboring landowner's concerns prior to submitting its final Project layout.

On June 9, 2021, the Commission issued a Notice of Postponement and Continuance continuing the matter pending rescheduling at an appropriate date and time.

On June 11, 2021, the United States Department of the Interior, Bureau of Land Management (BLM) filed comments on the Project.

On June 23, 2021, the Commission deemed the Application complete, conditioned on receipt at least 60 days prior to the hearing of the final site layout plan and the wetland delineation report, and receipt at least 30 days prior to the hearing of updated Figures 1 through 10 of the Application with the associated GIS shapefiles and all updated studies, including updated sound, shadow flicker, and telecommunications studies. The Commission also issued a Notice of Rescheduled Hearing, rescheduling the public hearing for August 24, 2021, at 9:00 a.m. central time (8:00 a.m. Mountain Time) at Four Seasons Pavilion West Wing, 12 Hwy 12 East, Bowman, ND 58623. The Notice identified the following issues to be considered:

1. Will the location and operation of the proposed facility produce minimal adverse effects on the environment and upon the welfare of the citizens of North Dakota?
2. Is the proposed facility compatible with the environmental preservation and the efficient use of resources?
3. Will the proposed facility location minimize adverse human and environmental impact while ensuring continuing system reliability and integrity and ensuring that energy needs are met and fulfilled in an orderly and timely fashion?

On June 25, 2021, Bowman Wind filed: (1) a final layout plan; (2) wetland delineation report; and (3) an updated publication map.

On July 6, 2021, LIUNA filed a Petition to Intervene.

On July 16, 2021, ALJ Dawson issued an Order granting LIUNA's Petition to Intervene.

On July 23, 2021, Bowman Wind filed: (1) updated Figures 1 through 12 in support of the Application; (2) a Comparison Figure (comparing the initial Project layout with the current Project layout); (3) an updated Sound Modeling Report; (4) an updated Shadow Flicker Report; (5) a U.S. Department of Commerce, National Telecommunications and Information Administration (NTIA) review response letter; (6) a Receptor Chart; (7) updated Application Table 7.0-1 (Potential Permits and Approvals); (8) a Weed Management Plan; (9) an Emergency Response Plan; (10) a Grassland Assessment; (11) an updated Bird and Bat Conservation Strategy (BBCS); and (12) a summary of Project changes.

On August 4, 2021, Bowman Wind filed Hearing Exhibit Nos. 2-24, and 26-28: (2) Summary of Project Adjustments; (3) updated Figures 1 through 12 in support of the Application; (4) Comparison Figure (comparing the initial Project layout with the current Project layout); (5) Updated Project Receptor Chart; (6) Emergency Response Plan; (7) Noxious Weed Management and Control Plan; (8) Updated Sound Modeling Report; (9) Updated Shadow Flicker Report; (10) BLM Letter, dated June 8, 2021; (11) NDGS Letter, dated May 12, 2021; (12) NTIA Review Response, dated April 5, 2021; (13) Bowman Wind Response to June 22, 2021 Request for Information; (14) Updated Application Table 7.0-1 (Potential Permits and Approvals); (15) Updated Cultural Resources Report, dated July 2021 [Confidential]; (16) Wetland Delineation Report (titled Jurisdictional Determination Report); (17) Grassland Assessment; (18) updated BBCS; (19) Additional NDGF Correspondence; (20) Summary of Avoidance, Minimization, and Mitigation Measures; (21) Prefiled Testimony of Brie Anderson; (21-A) Resume of Brie Anderson; (22) Prefiled Testimony of Scott Jansen; (22-A) Resume of Scott Jansen; (23) Prefiled Testimony of Ryan Henning; (23-A) Resume of Ryan Henning; (24) Prefiled Testimony of Sandeep Nimmagadda; (24-A) Resume of Sandeep Nimmagadda; (26) Bowman County Airport Authority Letter, dated July 2, 2021; (27) Additional U.S. Fish and Wildlife Service (USFWS) Correspondence; and (28) Battery Storage Facility Illustration.

Also on August 4, 2021, Bowman Wind filed a response to the July 22, 2021 letter from NDGF.

On August 6, 2021, LIUNA filed: (1) Prefiled Testimony of Kevin Pranis; and (2) Prefiled Testimony of Steve Cortina.

On August 20, 2021, USFWS filed comments on the Project.

On August 24, 2021, the public hearing was held as scheduled. At the public hearing, Bowman Wind submitted Hearing Exhibit Nos. 25, supplement to 27, and 29-32: (25) Signed Certification Relating to Order Provisions – Wind Energy Conversion Facility Siting, with accompanying Tree and Shrub Mitigation Specifications; (27) additional USFWS correspondence; (29) Figure 1.4 from BBCS – Original Assessment Area and Project boundaries for the Bowman Wind Project, Bowman County, North Dakota; (30) NDGF Project Layout Discussion Figure; (31) Pending Participation Chart; and (32) Unbroken Grassland Turbine Figures.

At the public hearing, Commissioners informed Bowman Wind that the Commission's decision on the permit would be put on hold until the company completed the local permitting process.

On November 12, 2021, Bowman Wind filed Late-Filed Hearing Exhibit Nos. 33-36: (33) Bowman County Weed Board Correspondence; (34) Battery Storage Facility Emergency Response Plan; (35) Television Reception Mitigation; and (36) Addendum to Cultural Resource Report [Confidential] and State Historical Society of North Dakota (SHSND) Correspondence.

On May 27, 2022, Bowman Wind filed a letter informing the Commission that a public hearing on Bowman Wind's Bowman County conditional use permit application was to be held on July 7, 2022, and it was their understanding that a decision on the permit would be issued that day.

On July 15, 2022, Bowman Wind filed a motion to consider post-hearing filings along with Late-Filed Exhibit Nos. 37-41: (37) an update regarding the Bowman County conditional use permit; (37(a)) a copy of the conditional use permit approved by Bowman County on July 7, 2022 for the Project; (38) an update regarding a waiver of the avoidance area sound requirement; (38(a)) a copy of a good neighbor agreement that contains a waiver of the avoidance area sound level requirement, signed by the owners of the one residence with sound levels modeled above 45 A-weighted decibels (dBA); (39) an update regarding the current project layout and project area; (39(a)) an updated figure showing the current project layout and project area; (39(b)) an updated comparison figure; (40) a statement that Bowman Wind is removing battery storage from its Application; and (41) an update regarding the specifications of the turbines under consideration.

Also on July 15, 2022, Bowman Wind filed proposed findings of fact, conclusions of law, and order.

On July 21, 2022, ALJ Dawson issued an Order admitting the post-hearing filings into the record.

On August 19, 2022, the Commission held a work session on the Application and directed staff to coordinate with Bowman Wind and NDGF on any remaining environmental impacts.

On August 31, 2022, Bowman Wind filed a request for an informal hearing on the Application.

On September 13, 2022, the Bowman County Commissioners filed a request for another public hearing on the Application.

On November 22, 2022, Commission staff attended a meeting between NDGF and Bowman Wind as an observer.

On December 20, 2022, Bowman Wind filed a motion to consider post-hearing filings along with a Supplement to Exhibit No. 19 (Additional NDGF Correspondence), including 19(a) (an October 13, 2022 email and attachments), 19(b) (October 13–19, 2022 emails), 19(c) (October 31–November 5, 2022 emails), 19(d) (a November 18, 2022 email), 19(e) (November 21, 2022 emails), 19(f) (a December 1, 2022 email and attachment), 19(g) (a December 12, 2022 email), and 19(h) (December 13–14, 2022 emails); Supplement to Exhibit No. 22 (an update to the prefiled testimony of Scott Jansen regarding the execution of a Generator Interconnection Agreement for the Project); and Late-Filed Exhibit No. 42 (an update regarding the current Project layout), including 42(a) (an updated figure showing the current Project layout), and 42(b) (an updated comparison figure).

On January 3, 2023, the Commission granted Bowman Wind's motion to consider post-hearing filings.

On January 20, 2023, Bowman Wind filed updated proposed Findings of Fact, Conclusions of Law and Order.

On January 25, 2023, Bowman Wind filed a supplement to Exhibit Nos. 19 and 19(a) through 19(h).

On January 25, 2023, the Commission held a work session to discuss NDGF's recommendations.

On February 6, 2023, Bowman Wind filed Late-Filed Exhibit No. 43 (figure showing updated Project boundary map).

Having allowed all interested persons an opportunity to be heard and having heard, reviewed, and considered all testimony and evidence presented, the Commission makes its:

Findings of Fact

1. Bowman Wind, LLC is a Delaware limited liability company and is a subsidiary of Apex Clean Energy Holdings, LLC. Bowman Wind is authorized to do business in the State of North Dakota, as evidenced by the Certificate of Good Standing issued by the North Dakota Secretary of State on January 28, 2021 (Case No. PU-21-122).
2. The Project will be owned and operated by Bowman Wind.

Size, Type, and Preferred Location of Facility

3. Bowman Wind proposes to construct the Project within approximately 33,890 acres of land in Bowman County, North Dakota (Project Area). Bowman Wind requests that the Project Area, as depicted as the "2023 Project Boundary" on the Late-Filed Exhibit No. 43, be designated as the site for the Project. The Project will consist of up to 74 wind

turbines and have a nameplate capacity of up to 208.7 megawatts (MW), with up to 200.1 MW delivered to the grid.

4. Bowman Wind has not yet selected a specific turbine model for the Project.

5. The proposed Project layout is designed to accommodate any of the turbine models under consideration at most turbine locations. However, there are a few locations that will only work for certain turbine models.

6. Bowman Wind sited 76 of the 82 proposed turbine locations to comply with applicable setbacks for a turbine up to 107.5 meters (353 feet) in hub height, with an up to 158-meter (519 feet) rotor diameter, and with a total tip height of 186.5 meters (612 feet). The remaining six proposed turbine locations (T1, T6, T17, T9, T14, and S1) are currently designed to use the GE-127 2.82 MW turbine or a turbine with similar (or shorter) specifications. Turbine model specifications for the GE-127 2.82 are provided in Section 4.1.1 of the Application (Hearing Exhibit No. 1).

7. Associated Project facilities constructed within the Project Area will include access roads and improvements to existing roads (as needed), underground electrical collection and communication lines with above-ground junction boxes, up to two permanent meteorological towers, an Aircraft Detection Lighting System (ADLS) or other technology suitable to the Commission on the Project in accordance with Section 49-22-16.4 of the North Dakota Century Code, an operations and maintenance (O&M) facility, and a Project substation. Other temporary facilities required for the Project's construction phase include a concrete batch plant, laydown areas for an equipment and construction management facility, intersection improvements, crane pads and working pads, and staging areas.

8. Foundation size and design will be finalized based on the results of the geotechnical analyses conducted once the turbine model(s) is selected.

9. Each turbine will communicate directly with the Supervisory Control and Data Acquisition (SCADA) system for remote performance monitoring, energy reporting, and troubleshooting.

10. Bowman Wind currently holds wind energy lease and easement agreements covering all land that is needed to construct the Project.

11. Construction of the Project is anticipated to begin as early as the fourth quarter of 2023. Commercial testing is anticipated to take place after construction is complete, with commercial operations beginning as early as third quarter 2024.

12. The estimated cost for construction of the Project is approximately \$300 million.

13. The Project will interconnect to the grid at the Basin Electric Power Cooperative Rhame 230 kilovolt (kV) substation, located in Bowman County, North Dakota. To

interconnect the Project to the grid, Bowman Wind will construct a 230 kV generation interconnection line between the Project substation and the Rhame 230 kV substation. The generation interconnection line will be less than one mile long and therefore is not subject to the jurisdiction of the Commission as a transmission facility.

14. On August 24, 2022, Bowman Wind entered into a Generator Interconnection Agreement with Southwest Power Pool, Inc. and Basin Electric Power Cooperative authorizing the Project's interconnection to the electric grid.

Study of Preferred Location

15. Bowman Wind performed a desktop evaluation of the Project Area for soils, land use, wetlands and waterbodies, trees and shrubs, protected species, and critical habitats.

16. Woodlands comprise less than one percent of the total Project Area. If trees or shrubs are impacted by the Project, Bowman Wind will coordinate with landowners regarding tree removal and replacement and comply with the Commission's tree and shrub mitigation specifications.

17. A wetland delineation was completed for the Project. In the event the Project layout changes from what is depicted in Late-Filed Exhibit No. 43, Bowman Wind will complete a wetland delineation of any previously un-surveyed areas, as necessary. Bowman Wind has designed the Project to avoid permanent impacts to delineated wetlands. Wetland impacts are anticipated to fall under the threshold for a U.S. Department of the Army Corps of Engineers (USACE) Clean Water Act Nationwide Permit.

18. No USFWS grassland or wetland easements or USFWS Waterfowl Production Areas (WPAs) are present in the Project Area.

19. Bowman Wind conducted environmental studies of the Project Area, and impacts to wildlife are anticipated to be minimal. Among the studies conducted were:

A. Avian Surveys. Bowman Wind conducted baseline general avian use surveys, fixed-point avian use surveys, raptor and eagle aerial nest surveys, and additional ground-based raptor and eagle nest surveys at specific locations. The surveys identified avian species and raptor nests within and eagle nests near the Project Area. No known, active bald or golden eagle nests were identified within the Project Area. In addition, per recommendations from the NDGF and USFWS, Bowman Wind also conducted surveys for black-tailed prairie dogs, which are a known potential prey source for eagles, and incorporated the information into the Project design.

B. Greater Sage-Grouse Lek Surveys. The surveys indicate there are no known, active greater sage-grouse leks within the Project Area. The closest greater sage-grouse lek is approximately 0.8 miles west of the Project Area. Efforts

to mitigate impacts to the greater sage grouse are detailed in Findings of Fact No. 42.

C. Sharp-Tailed Grouse Lek Survey. The surveys indicate there are no known sharp-tailed grouse leks within the Project Area. The closest turbine to a sharp-tailed grouse lek is 0.6 miles; but this lek was unoccupied in both years of lek surveys. Based on historic lek data, no active sharp-tailed grouse leks are located within two miles of any proposed turbine locations. Efforts to mitigate impacts to the sharp tailed grouse are detailed in Findings of Fact No. 42.

D. Acoustic Bat Monitoring and Northern Long-Eared Bat (NLEB) Desktop Habitat Assessment. Bat activity in the Project Area is relatively low compared to other projects in the Midwest. Potential NLEB calls were recorded on three of the 216 detector-nights; however, qualitative identification of these calls, conducted by a qualified bat biologist, determined that the calls were not produced by the NLEB. The NLEB Desktop Habitat Assessment found no potentially suitable summer NLEB habitat exists within the Project Area.

E. Grassland Assessment. Bowman Wind conducted an unbroken grassland desktop and field assessment for the Project. Five of the 82 proposed turbine locations are located, in whole or in part, on unbroken grassland. Although five turbines are located on unbroken grasslands, they impact 0.12 acres of unbroken grasslands. Additionally, the turbines located on unbroken grassland are sited in fragmented areas and in areas designated as unsuitable grassland habitat per the C. Loesch USFWS grassland breeding bird habitat dataset. Further, based on coordination with NDGF, Bowman Wind will avoid all ground disturbing construction activities at the five turbine sites located, in whole or in part, on unbroken grassland (turbines 2, 6a, 42a, 25, and S6) between March 15 and July 15, which minimizes the potential for impacts to individual sharp-tailed grouse should lekking occur near these turbine sites.

20. Bowman Wind completed a Class I Archeological Literature Review of a larger potential Project Area plus a two-mile buffer from Project facilities and a Class III Intensive Cultural Resources Pedestrian Survey of all areas that might be impacted by construction of the Project.

21. The Class III inventory identified 30 archaeological sites that are unevaluated for listing in the National Register of Historic Places (NRHP). Bowman Wind incorporated the SHSND's comments and recommendations into the Class III reports.

22. In the event the Project layout changes from the layout provided in Late-Filed Exhibit No. 43, Bowman Wind will do the following: complete Class III cultural resource survey work for any previously un-surveyed areas, per SHSND's guidance; submit the findings to SHSND for review; and obtain and file with the Commission a copy of SHSND's response prior to beginning construction in those areas.

23. Bowman Wind completed a Class II Architectural History Survey for structures 45 years of age or older within a two-mile visual area of potential effect of the Project's proposed turbine array. The Class II Survey identified two historic architectural sites within two miles of the Project layout, both of which are recommended as potentially eligible for listing in the NRHP. Bowman Wind will comply with SHSND's recommendations for mitigating minor indirect (visual) impacts to these two architectural history resources.

24. Section 49-22-16(4) of the North Dakota Century Code provides that a site shall not be designated that violates the rules of any state agency, and that compliance with an agency's rules shall be presumed if the agency fails to present its position with respect to the proposed facility at the public hearing. Bowman Wind sent Project notification letters to 34 federal, state, and local agencies, including the agencies and officers designated for notice pursuant to North Dakota Administrative Code Section 69-06-01-05. The federal, state and local departments, agencies and entities that were consulted and provided comment are as follows:

A. Federal – United States Department of Defense (DOD) and Ellsworth Air Force Base; USACE, North Dakota Regulatory Office; NTIA; USFWS; Federal Aviation Administration (FAA); and BLM.

B. State – North Dakota Parks & Recreation; NDGF; North Dakota State Water Commission; SHSND; and NDGS.

C. Local – Bowman County Airport Authority; Bowman County Weed Board; and Bowman County Planning and Zoning and Board of County Commissioners.

25. Agency consultations and comments are noted in Appendix D of the Application and in the exhibits and testimony presented at the public hearing and in post-hearing filings.

26. Bowman Wind entered into an agreement with the DOD and the U.S. Air Force to mitigate potential effects of Project turbines on airborne doppler radar and training routes.

Siting Criteria

27. Chapter 69-06-08 of the North Dakota Administrative Code (NDAC) sets forth certain criteria to guide the Commission in evaluating the suitability of granting an application for a certificate of site compatibility. The criteria, as set forth in Section 69-06-08-01 of the North Dakota Administrative Code are classified as Exclusion Areas, Avoidance Areas, Selection Criteria, and Policy Criteria.

28. Five Exclusion Areas specific to wind energy conversion facilities are present within the Project Area: (a) areas less than 1.1 times the height of the turbine from the nearest edge of an interstate or state roadway right-of-way; (b) areas less than 1.1 times the height of the turbine plus 75 feet from the centerline of any county or maintained

township road; (c) areas less than 1.1 times the height of the turbine from the nearest edge of railroad right-of-way; (d) areas less than 1.1 times the height of the turbine from the nearest edge of a 115 kV or higher transmission line right-of-way; and (e) areas less than 1.1 times the height of the turbine from the property line of a non-participating landowner and three times the height of the turbine from an inhabited rural residence of a nonparticipating landowner, unless a variance has been granted. No turbines will be located within these exclusion areas.

29. All setbacks are measured from the closest edge of the base of the turbine to the closest part of the applicable feature.

30. NDAC Section 69-06-08-01(3) identifies various avoidance areas. An energy conversion facility must not be sited within an Avoidance Area unless the applicant shows that under the circumstances there is no reasonable alternative. In determining whether an Avoidance Area should be designated for a facility, the Commission may consider, among other things, the proposed management of adverse impacts; the orderly siting of facilities; system reliability and integrity; the efficient use of resources; and alternative sites.

31. Historical resources which are not designated as Exclusion Areas are Avoidance Areas. The evidence indicates that there are historical resources located within the Project Area. However, the Project has been sited to avoid these resources. Further, the SHSND concurred with a finding of "No Adverse Effect" for the Project "provided it takes place in the location and manner described in the documentation provided the mitigation described takes place."

32. Wetlands are present within the Project Area, but the Project has been sited to avoid all permanent impacts to wetlands. The Project has been designed to avoid and/or minimize temporary impacts to wetlands. Where collection lines would intersect a wetland, impacts will be avoided by boring beneath the wetland.

33. Areas within known floodplains as defined by the geographical boundaries of the hundred-year flood are Avoidance Areas. There are 95 acres of the 100-year floodplain in the Project Area associated with Spring Creek and an unnamed tributary of Spring Creek in the northern portion and Cold Turkey Creek in the center southeast portion of the Project Area. No Project facilities will be located within floodplains.

34. Areas where, due to the operation of the facility, the sound levels within one hundred feet of an inhabited residence or community building will exceed forty-five dBA is an Avoidance Area. Bowman Wind conducted sound analyses for the Project. One residence is modeled at 47 dBA within 100 feet of the receptor. However, Bowman Wind has secured a good neighbor agreement, which includes a waiver of the sound requirement, from the owner of that residence. All other receptors, both participating and non-participating, are modeled below 45 dBA within 100 feet of the receptor. Accordingly,

sound levels within 100 feet of an inhabited residence or community building will not exceed 45 dBA, unless waived in writing by the owner of such residence or building.

35. Bowman Wind conducted shadow flicker analyses for the Project. Based on the shadow flicker analysis, modeled shadow flicker levels will be below 30 hours per year at all residences.

36. The Project has been designed to minimize tree removal to the extent possible and removal would be limited to locations where impacts are unavoidable, such as where a linear facility must cross a tree row. Any tree and shrub removal and replacement will be conducted in accordance with the Commission's tree and shrub mitigation specifications. Bowman Wind requested Commission approval to remove trees and/or shrubs from an area wider than 50 feet to facilitate collocation of linear facilities.

37. In accordance with the Commission's Selection Criteria, a site may be approved if it is demonstrated any significant adverse effects resulting from the location, construction, and operation of the energy conversion facility will be at an acceptable minimum or the effects will be managed and maintained at an acceptable minimum. In accordance with the Commission's Policy Criteria, preference may be given to an applicant demonstrating certain benefits of the proposed energy conversion facility in accordance with NDAC Section 69-06-08-01(6).

38. With all 82 proposed turbine locations, the Project would occupy approximately 88.2 acres of land, or approximately 0.22 percent of the total Project Area, during the life of the Project. However, since Bowman Wind plans to construct up to 74 of the 82 proposed locations, actual impacts will be less. Bowman Wind will continue to work with landowners to minimize land use disruptions from the siting of the facilities. No impacts to the quality of the agricultural land are anticipated.

39. Bowman Wind submitted evidence demonstrating any significant adverse effects resulting from the location, construction, and operation of the Project, as related to the Selection Criteria set forth in Section 69-06-08-01(5) of the NDAC, will be at an acceptable minimum or managed and maintained at an acceptable minimum.

40. During construction, the Project will likely result in a temporary increase in traffic on county and township roads. The increase in traffic during construction is not expected to be at a volume that will disrupt residents or travel in the Project Area. Haul road permits will be obtained from Bowman County, applicable townships, and the North Dakota Department of Transportation (NDDOT), if needed. A Road Use Agreement with Bowman County will be finalized and approved by the Bowman County Commissioners and up to six townships prior to the start of construction. County and township roads will be restored in accordance with the Signed Certification Relating to Order Provisions – Wind Energy Conversion Facility Siting (dated August 20, 2021). During operation, no adverse effects to transportation facilities or networks are anticipated.

41. Bowman Wind analyzed the relevant Policy Criteria set forth in Section 69-06-08 02(4) of the NDAC. There is no need for the Commission to give preference to the applicant in this proceeding.

42. NDGF made four recommendations in its July 21, 2021 letter, which have been considered in Project siting:

A. *All proposed turbines be removed from within greater sage-grouse PCA and at least 4 miles from known sage-grouse leks.*

NDGF and Bowman Wind offered competing expert testimony and/or correspondence about the impacts of the placement of six turbines (turbines 45, 46, 48, 41, 71, and 73) within four miles of a greater sage grouse lek as depicted on the supplement map filed on January 25, 2023. NDGF recommended that all six turbines were to be removed from the Project to prevent impacts to the species. All six turbines are located on cultivated cropland in areas with high wellhead density. Chad LeBeau testifying on behalf of Bowman Wind, who has studied the potential indirect impacts of wind turbines on greater sage grouse, testified that placement of turbines within previously disturbed and fragmented areas would have minimal impacts to the species. He testified that greater sage grouse generally use an area within four miles of a lek, but they only use pockets of habitat that meet the greater sage grouse's needs, and that in his opinion, placement of turbines at least two miles from greater sage-grouse leks in agricultural areas avoids potential impacts to greater sage grouse.

In further coordination between NDGF and Bowman Wind, NDGF noted its main concern was with the turbines 71 and 73, sited approximately two miles from the closest greater sage-grouse lek. Bowman Wind agreed to remove turbines 71 and 73 to address NDGF's concerns and avoid potential impacts to habitat connectivity. Four turbines (turbines 45, 46, 48, and 41) are sited within four miles of the greater sage-grouse lek, but these turbines are located on cultivated cropland at the edge of the four-mile lek buffer and at the edge of the species range, which minimizes the potential for impacts to greater sage grouse. The Commission requested the distance of the four remaining turbines to the lek, and Bowman Wind responded that turbines T46, T45, T48, and T41 are located 3.60, 3.80, 3.85, and 3.99 miles away from the lek, respectively. In its final correspondence with Bowman Wind discussing its recommendations, NDGF did not mention removal of the four turbines on the edge of the four-mile buffer.

B. *If voluntary offsets are pursued, the primary strategy should be to re-create grasslands on broken land (e.g., cropland) rather than preserve existing grasslands.* In the BBCS, Bowman Wind committed to acquire voluntary unbroken grassland conservation agreements for the life of the Project as a voluntary offset for potential grassland breeding bird displacement impacts.

C. *In the absence of two years pre-construction sharp-tailed grouse surveys, all turbines should be sited off unbroken grasslands to avoid disturbance to any leks which may be present.* Five turbines (turbines 2, 6a, 42a, 25 and S6) are sited at least partially on unbroken grasslands. These turbines impact 0.12 acres of unbroken grasslands. To minimize potential impacts to individual sharp-tailed grouse that may lek in proximity to these turbines, Bowman Wind agreed to avoid all ground disturbing construction activities at turbine locations 2, 6a, 42a, 25, and S6 between March 15 and July 15.

D. *Acknowledge that [Private Land Open to Sportsmen (PLOTS)] tracts agreements cannot be altered without landowner and [NDGF] consent.* Bowman Wind acknowledged that a PLOTS tract agreement is a signed legal agreement between NDGF and the landowner.

Measures to Minimize Impacts

43. Bowman Wind has agreed to the measures to mitigate Project impacts as indicated by the attached Certification Relating to Order Provisions Wind Energy Conversion Facility Siting, with accompanying Tree and Shrub Mitigation Specifications (dated August 20, 2021). Unless additional Commission approval is obtained, Bowman Wind is authorized to clear trees and shrubs in the Project Area up to 100 feet wide in limited areas only where it is necessary to collocate linear facilities (i.e., collection lines, access roads, crane walks).

44. Based on the current Project layout, as depicted in Late-Filed Exhibit No. 43, all Project turbines are located at least 2,640 feet from occupied dwellings, commercial buildings, and publicly used facilities, unless a variance is granted.

45. Bowman Wind testified that they will employ a third-party environmental monitor during construction of the Project.

46. Bowman Wind developed a Noxious Weed Management and Control Plan (Hearing Exhibit 7) that was approved by the Bowman County Weed Board.

47. Bowman Wind has also developed an Emergency Response Plan (Late-Filed Exhibit 34(a)) for the Project. Bowman Wind will hold a pre-construction meeting with Bowman County's response personnel and project contractors prior to construction. Each year, Bowman Wind will check-in with the response personnel to determine what form of emergency drills are appropriate to train and coordinate efforts with local emergency responders.

48. Bowman Wind has prepared a Bird and Bat Conservation Strategy (Hearing Exhibit No. 18) for the Project, which outlines specific avoidance, minimization, and mitigation measures to conserve birds and bats during project development, planning, construction, operation, maintenance, and decommissioning.

49. An Unanticipated Discoveries Plan has been developed and was reviewed by the SHSND.
50. Subject to FAA approval, Bowman Wind will install and operate an ADLS or other technology suitable to the Commission on the Project in accordance with Section 49-22-16.4 of the North Dakota Century Code.
51. Lighting for facilities will not exceed the minimum required for safety and security and full cutoff designs that minimize upward light pollution will be selected.
52. Bowman Wind will use best management practices (BMPs) to minimize impacts on ground and surface water and to prevent soil erosion. Bowman Wind will implement appropriate erosion control measures. Bowman Wind will obtain coverage under the North Dakota Pollutant Discharge Elimination System (NDPDES) General Construction Permit and develop a Storm Water Pollution Prevention Plan (SWPPP). Construction of the Project is not anticipated to have a significant adverse impact on surface or ground water resources or soils.
53. All roads, turbine pads, and trenched areas will be regularly inspected and maintained to minimize erosion.
54. Section 49-22-16(2) of the North Dakota Century Code provides that no energy conversion facility site shall be designated that violates any local land use, zoning or building rules, regulations or ordinances. Bowman Wind obtained a County Use Permit for the Project from Bowman County on July 7, 2022. Bowman Wind will comply with applicable county zoning ordinance requirements.
55. Bowman Wind will participate in the North Dakota One-Call Excavation Notice System.
56. Bowman Wind has and will continue to coordinate with emergency services providers to determine appropriate safety precautions and standards. Bowman Wind has developed an Emergency Response Plan (Hearing Exhibit No. 6) to implement these precautions and standards.
57. Lightning and grounding protection for all wind farm equipment is designed and constructed to be compliant with all applicable NEC and NESC requirements.
58. The Project will be constructed in accordance with National Electric Safety Code (NESC) and National Electric Code (NEC) requirements.
59. Bowman Wind will comply with the Commission's decommissioning rules, including filing a decommissioning plan with the Commission prior to the commencement of operation of the Project and performing decommissioning in accordance with all applicable rules and regulations.

Additional Issues

60. LIUNA intervened in this proceeding and submitted testimony relating to the benefits of hiring a local labor force for energy conversion and transmission projects. In its Application, Bowman Wind indicated they would encourage its balance-of-plant contractor to source construction workforce from within the State of North Dakota and/or areas surrounding the Project.

From the foregoing Findings of Fact, the Commission now makes its:

Conclusions of Law

1. The Commission has jurisdiction over this proceeding under Chapter 49-22 of the North Dakota Century Code (NDCC).
2. Bowman Wind is a utility as defined in NDCC Section 49-22-03(14).
3. The Project is an electric energy conversion facility as defined in Section 49-22-03(5) of the NDCC.
4. The Application submitted by Bowman Wind meets the site evaluation criteria required by Chapter 49-22 of the NDCC.
5. The location, construction, and operation of the proposed electric energy conversion facility will produce minimal adverse effects on the environment and upon the welfare of the citizens of North Dakota.
6. The proposed electric energy conversion facility is compatible with environmental preservation and the efficient use of resources.
7. The proposed electric energy conversion facility location will minimize adverse human and environmental impact while ensuring continuing system reliability and integrity and ensuring that energy needs are met and fulfilled in an orderly and timely fashion.
8. The Commission has jurisdiction to ensure compliance with NESC standards in the construction and operation of the Project.

From the foregoing Findings of Fact and Conclusions of Law, the Commission now makes its:

Order

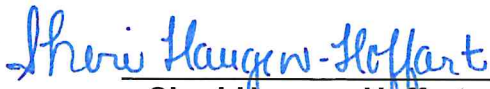
The Commission orders:

1. Certificate of Site Compatibility No. 65 for an Energy Conversion Facility is issued to Bowman Wind, LLC, designating a site for a wind energy conversion facility that corresponds to the “2023 Project Boundary” depicted on Late-Filed Exhibit No. 43.
2. Within the designated site, as depicted as the “2023 Project Boundary” on Late-Filed Exhibit No. 43, Bowman Wind is authorized to site, construct, operate, and maintain wind turbines and associated equipment, access roads and improvements to existing roads, an O&M facility, a substation, up to two permanent meteorological towers, a system of underground electrical collection lines and communication cables with above-ground junction boxes, and ADLS equipment and components, as well as any other associated facilities identified in the Application, at the hearing, or in any supplemental filings.
3. If modifications are made to the Project layout, Bowman Wind will complete a Class III cultural resource survey for any previously un-surveyed portions of the designated site affected by Project-related construction activities, in accordance with SHSND guidance; will submit cultural resource findings to SHSND for review; and will obtain and file a copy of SHSND’s response with the Commission prior to beginning construction in said areas.
4. If modifications are made to the Project layout, Bowman Wind will complete a wetland delineation of any previously un-surveyed areas affected by Project-related activities, as necessary, and file a copy with the Commission prior to beginning construction in said areas.
5. Bowman Wind shall comply with the Commission’s Avoidance Area sound requirement. In the event Project modifications occur that are not covered by its current sound analysis, Bowman Wind will conduct a sound analysis to ensure the Project complies with the Commission’s Avoidance Area sound requirement. Bowman Wind shall file a copy of such sound analysis with the Commission prior to construction in said areas.
6. Bowman 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, Bowman Wind shall conduct further shadow flicker analysis to ensure this requirement is met and file a copy of such analysis with the Commission prior to construction in said areas.
7. The August 20, 2021 Certification Relating to Order Provisions Wind Energy Conversion Facility Siting, with accompanying Tree and Shrub Mitigation Specifications (Hearing Exhibit No. 25) is incorporated by reference and attached to this Order. Bowman

Wind is authorized to clear trees and shrubs in the Project Area up to 100 feet wide in limited areas only where necessary to collocate linear facilities (i.e., collection lines, access roads, and/or crane walks).

8. Prior to commencing construction of any portion of the Project, Bowman Wind shall obtain all other necessary licenses and permits for the construction of such portion and provide copies to the Commission.

PUBLIC SERVICE COMMISSION


Sheri Haugen-Hoffart
Commissioner


Randy Christmann
Chair


Julie Fedorchak
Commissioner

PUBLIC SERVICE COMMISSION

STATE OF NORTH DAKOTA

Certificate of Site Compatibility Number 65

This is to certify that the Commission has designated an energy conversion facility site for Bowman Wind, LLC, for the construction and operation of a wind energy conversion facility and associated facilities in Bowman County, North Dakota.

The facility may be sited in this designated location in compliance with the energy conversion facility siting criteria. This certificate is issued in accordance with the Findings of Fact, Conclusions of Law and Order of the Commission in Case No. PU-21-121 dated February 8, 2023, and is subject to the conditions and limitations noted in the order.

Bismarck, North Dakota, February 8, 2023.

ATTEST:

PUBLIC SERVICE COMMISSION



Executive Secretary



Commissioner

STATE OF NORTH DAKOTA
PUBLIC SERVICE COMMISSION

Bowman Wind, LLC
208.7 MW Bowman Wind Project – Bowman County
Siting Application

Case No. PU-21-121

CERTIFICATION RELATING TO ORDER PROVISIONS
WIND ENERGY CONVERSION FACILITY SITING

I am Ken Young, Chief Operating Officer of Apex Clean Energy Holdings, LLC and a representative of Bowman Wind, LLC ("Company") with authority to bind Company to requirements to be set forth by the Commission in its Order and I certify the following:

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.
2. Company agrees to comply with the rules and regulations of all other agencies having jurisdiction over any phase of the proposed energy conversion facility including all city, township, and county zoning regulations.
3. 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.
4. 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.
5. 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.
6. 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.

7. 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.

Construction:

8. 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.
9. Company understands and agrees that all cultural resource mitigation plans must be approved by the North Dakota State Historic Preservation Office prior to the start of any fieldwork and construction activity in the affected area.
10. Company understands and agrees that topsoil removal will begin when the Commission's third party construction inspector is present at the Project site to observe that topsoil is properly removed and kept segregated from subsoil until replacement occurs. Company shall establish the date and time for the Commission's third-party construction inspector's topsoil removal oversight in the preconstruction conference.
11. 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 monthly basis.
12. 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.
13. Company agrees to construct and operate the energy conversion facility in accordance with all applicable safety requirements.
14. 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.
15. Company understands and agrees that topsoil, up to 12 inches, or topsoil to the depth of cultivation, whichever is greater, over and along trench areas, roadways, tower

locations, and locations of associated facilities must be carefully stripped and segregated from the subsoil. Any area on which excavated subsoil will be placed must first be stripped of topsoil. The stripped topsoil must not be stockpiled in natural drainages, and must be protected from water erosion. Care must be taken to protect topsoil from unnecessary compaction by heavy machinery. Unless otherwise approved by the Commission, topsoil must be removed before topsoil freezes in the late fall/ early winter to the point that frost inhibits proper soil segregation. After backfilling with subsoil is completed, any excess subsoil must be placed over the excavation area, blending the grade into existing topography. Topsoil must be replaced over areas from which it was stripped only after the subsoil is replaced.

16. 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.
17. 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.
18. Company understands and agrees that if any cultural resource, paleontological site, archeological site, historical 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, and a report of such examination is filed with the Commission.
19. 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 are taken by Company.
20. Company understands and agrees that the Commission's third party construction inspector will be allowed has authority to stop Project construction activities to prevent an imminent hazard from occurring before the Commission could take formal action with respect to said activities. For purposes of this provision, "imminent hazard" means a condition that presents a substantial likelihood of death, serious illness, severe personal injury, or a substantial endangerment to health, property, or the environment. Other Project construction activities would be allowed to continue in the event of a probable violation of the siting laws, siting rules, or applicable Commission Orders if, in the opinion of the Commission, construction activities are likely to result in irreparable or significant harm.

Restoration and Maintenance:

21. Company agrees that it shall, as soon as practicable upon the completion of the construction of the energy conversion facility, 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.

22. 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.
23. 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.
24. Company will fulfil its obligation for reclamation and maintenance of the approved site continuing throughout the life of the energy conversion facility.
25. Company will repair all fences and gates removed or damaged during all phases of construction and operation of the proposed energy conversion facility.
26. Company will repair or replace all drainage tile broken or damaged as a result of construction and operation of the proposed energy conversion facility.
27. Company agrees to comply with the Tree and Shrub Mitigation Specifications, attached.
28. 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.
29. 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.
30. 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.

Communication with Landowners and PSC:

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

32. Company understands and agrees that it shall advise the Commission as soon as reasonably possible of any extraordinary events which take place at the site of the energy conversion facility, including injuries to any person, a tower collapse, or a catastrophic turbine failure.
33. Company agrees to report to the Commission, as soon as reasonably possible, the presence in or near the approved site of any critical habitat of threatened or endangered species that Company becomes aware of and which were not previously reported to the Commission.
34. Company agrees to provide the Commission with both an electronic and a paper copy of the site approved by the Commission and the facility 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 site approved by the Commission and the facility design specifications for the construction of the energy conversion facility showing the location of the energy conversion facility as built 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.
35. 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.
36. 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.
37. Company understands and agrees that it shall implement a procedure for how complaints concerning the proposed energy conversion facility will be handled by Company

Modification of Energy Conversion Facility or Energy Conversion Site Plan:

38. Before conducting any construction activities for any modification within the designated site, the Company will file the name and contact information for a key contact person for the purposes of notice and communication during the site modification application and will use the following procedures:
- A. Before conducting any construction activities for any modification within the designated site, and such **construction activities will not affect any known exclusion or avoidance areas** within the designated site, the Company will file certification and supporting documentation:
 - 1. Affirming that construction activities will not affect any known exclusion or avoidance areas within the designated site;
 - 2. Including a map meeting the requirements of N.D. Admin. Code § 69-06-04-01(2)(n) identifying the designated site and site modification(s); and
 - 3. Affirming that Company will comply with the Commission's order, law and rules designating the site.
 - B. Before conducting any construction activities for any modification within the designated site, and such construction activities will not affect any known exclusion but **may affect an avoidance area** within the designated site, the Company will file:
 - 1. A specific description of the avoidance area expected to be impacted, including a map meeting the requirements of N.D. Admin. Code § 69-06-04-01(2)(n) identifying:
 - a. the designated site and the site modification;
 - b. all exclusion and avoidance areas within the portion of the designated site containing the site modification.
 - 2. Certification and supporting documentation affirming that construction activities will not affect any known exclusion area.
 - 3. All field studies performed on the portion of the designated site containing the site modification;
 - 4. Specific information about any mitigation measures Company will take within the modification area;
 - 5. Certification that each owner of real property on which the modification is to be located and any applicable governmental entity with an interest in the same modification area do not oppose the modification;
 - 6. Certification that unless the Commission previously authorized the impact to the same avoidance area, that the utility has good cause and a specific reason to impact the avoidance area and a reasonable alternative does not exist;
 - 7. Certification that Company will comply with the Commission's order, law and rules designating the site.
39. Company acknowledges and agrees that written authorization from the Commission for impacting the avoidance area is necessary prior to commencement of construction activity.

Dated this 20th day of August, 2021.

Bowman Wind, LLC

By: Apex Clean Energy Finance, LLC

Its: Sole Member

By: Apex GBR, LLC

Its: Sole Member

By: Apex Clean Energy Holdings, LLC

Its: Manager

By  _____

Its COO _____

**STATE OF NORTH DAKOTA
PUBLIC SERVICE COMMISSION**

**Bowman Wind, LLC
208.7 MW Bowman Wind Project – Bowman County
Siting Application**

Case No. PU-21-121

Tree and Shrub Mitigation Specifications

Inventory

Prior to cutting or clearing trees or shrubs for construction:

- All trees one-inch or greater in diameter at breast height must be inventoried to record the location, number, and species.
- All shrubs and all coniferous trees of any diameter must be inventoried to record the location, number, and species.

Clearing

The maximum width of tree and shrub removal is 50 feet, unless otherwise approved by the Commission.

Replacement

1. Landowners must be given the option to have trees and shrubs that are removed from their property replaced on their property. The landowner may waive this option in writing. If the landowner waives this option, the company shall plant replacement trees and shrubs in an alternate location in the same region, if practical.
2. Trees and shrubs must be replaced on a minimum two-to-one basis. The company shall develop a Tree and Shrub Mitigation Plan (Plan) in consultation with landowners who are seeking replacement trees and shrubs and in accordance with USDA-NRCS-North Dakota Field Office Technical Guide: Windbreak and Woodland Tree Care and Management. The guidelines outlined in the Technical Guide shall be followed until filing of the Plan summary outlined in number 5 below.
3. The purpose of the company's Tree and Shrub Mitigation Plan is to create sustainable plantings, appropriate for the local soil and growing conditions that will provide long-term benefit to landowners, farmers and ranchers, the community, wildlife and the environment.
4. The Plan, including the proposed number, variety, type, location, and approximate date for plantings, shall be filed with and approved by the Commission.
5. Two years after completion of the plan, the company must file a summary documenting how the plan achieved the purpose outlined in number 3 above. The summary must also report the number of surviving replacement trees and shrubs.
6. The Commission will consider, on a limited basis as conditions warrant, mitigation plans that provide long-term wildlife habitat and conservation benefits but do not involve the replanting of trees and shrubs.