

JULY 27, 2022
BOARD OF ADJUSTMENT
HUGHES COUNTY
STAFF REPORT

WEDNESDAY – JULY 27, 2022

HUGHES COUNTY BOARD OF ADJUSTMENT

CONDITIONAL USE PERMIT – North Bend Wind Project

Applicant/Owner: North Bend Wind Project, LLC.

Property Description: Project area includes parts of Harrold, Pleasant Valley, Butte, and Webster Townships

Ordinance: Ordinance 1997-3: Article 2, Section 2-117.F – Requirements for Siting Large Wind Energy Conversion System and Article 4, Section 4-101 to 109, Agricultural District A general provisions, Section 4-105 Conditional Uses

Conditional Use Permit – Wind Energy Systems, (Ord. 1997-3 Article 2 Section 2-117.F)

Zoning Designation: Agricultural District A, (Ord. 1997-3 Article 4, Section 4-101 to 109);

Request: 1. North Bend Wind Project (NBWP) requests a Conditional Use Permit to operate a Large Wind Energy Conversion system in Hughes County, South Dakota. The request includes up to twenty seven (27) wind turbines, two (2) meteorological towers, electrical transmission lines, and associated activities in Hughes County. The entire project is a 200-MW Wind Energy System with up to 71 wind turbines located in Hyde County and Hughes County, associated electrical transmission lines, substation, communications systems, operation and maintenance facilities, Meteorological Towers, and other accessory uses. The project area encompasses approximately 46,931 acres in Hughes County and Hyde County

History/Issue(s): North Bend Wind Project has been granted a Conditional Use Permit by Hyde County. Hughes County Commissioners and North Bend Wind Project have agreed to, approved, and signed a haul road agreement to cover NBWP's use of Hughes County roads during the construction phase of this proposed project.

Specifics of Request:

1. North Bend Wind Project has defined a project area that includes approximately 24,591 leased acres in Hughes County for wind towers and electrical transmission lines.
2. The project will be interconnected to Western Area Power Authority's (WAPA) existing Fort Thompson to Oahe 230 kV transmission line at a new switchyard. The switchyard will be constructed in Hyde County.
3. The proposed wind turbine generators (WTGs) are General Electric 2.82-116. The WTGs have a hub height of 88.5 meters (290 feet), a rotor diameter of 127 meters (416 feet), with a total height with blade tip at the highest point of 152 meters (499 feet). These are slightly taller

than the turbines in use on the Triple H Wind Project immediately to the east of the NBWP which are 148.3 meters (486.6 feet).

4. Each turbine will have a 16 foot wide access road.
5. Each turbine will be connected via fiber optic cable for communications with the tower.
6. The operations and maintenance building for the Triple H project will most likely be used for NBWP also, the building is located in Hyde County.
7. The temporary laydown yard where tower components will be delivered before they are placed at the individual tower sites will be located in Hyde County.
8. The energy produced by the WTGs will be transmitted below ground through a network of 34.5 kV electrical transmission lines to the project substation, located in Hyde County.
9. Deliveries to the project sites will be routed through Hyde County before entering Hughes County, per the Haul Road Agreement.

Table 1

Tower			
ID	Latitude	Longitude	Section
6	44.44599	-99.691	2-111-74
7	44.44343	-99.6776	1-111-74
8	44.43449	-99.701	11-111-74
9	44.43725	-99.692	11-111-74
10	44.43685	-99.6804	12-111-74
14	44.43003	-99.7081	10-111-74
15	44.43173	-99.6911	11-111-74
16	44.42999	-99.6678	12-111-74
19	44.41925	-99.7298	16-111-74
20	44.42294	-99.7212	15-111-74
21	44.42284	-99.7081	15-111-74
22	44.42282	-99.6968	14-111-74
23	44.41925	-99.6669	13-111-74
25	44.41309	-99.7529	17-111-74
26	44.41614	-99.7478	17-111-74
27	44.41562	-99.7365	16-111-74
28	44.41663	-99.6755	13-111-74
30	44.40391	-99.7603	20-111-74
31	44.40826	-99.7571	20-111-74
44	44.36212	-99.6682	1-110-74
49	44.3494	-99.6672	12-110-74
54	44.3405	-99.691	11-110-74
55	44.34309	-99.6718	12-110-74
62	44.32776	-99.688	14-110-74
63	44.32768	-99.6798	13-110-74
64	44.33015	-99.6754	13-110-74

65	44.33003	-99.6671	13-110-74
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Meteorological Tower 1 44.4172 -99.7271 SE1/4 of Section 16-111-74
 Meteorological Tower 2 44.4207 -99.7191 NW1/4 of Section 15-111-74

Ordinance Requirements regarding this request:

1. Large Wind Energy Conversion Systems are a Conditional Use in Agricultural Zoning District A after a finding by the Board of Adjustment that their mode of conduct and location will not hinder the enjoyment and use of nearby property and will not disrupt the appropriate use of the land and resources of the county.
2. The zoning ordinance lists numerous requirements of Wind Energy Systems. Below is a breakdown of the review of the proposed Conditional Use Permit's compliance with those requirements.

Table 2

Section	Title	CUP Page & Section	Notes
2-117.B	Federal and State Requirements	Page 3 & 10 Section A.c.x Section F.a	Pre-construction FAA report is included. This section is not required until building permit applications are submitted.
2-117.F.1.a	Site Clearance	Page 4 Section B.a	
2-117.F.1.b	Topsoil Protection	Page 4 Section B.b	
2-117.F.1.c	Compaction	Page 4 Section B.c	
2-117.F.1.d	Livestock Protection	Page 4 Section B.d	
2-117.F.1.e	Fences	Page 4 Section B.e	
2-117.F.1.f.i	Public Roads	Page 6 Section C.a	Addressed in the haul road agreement approved by the County Commissioners on 6/6/2022. Pre-construction and construction phase haul road agreement.
2-117.F.1.f.i	Haul Roads	Page 7 Section C.a.i	Reference Haul Road agreement
2-117.F.1.f.ii	Turbine Access Roads	Page 4 & 7 Section B.a & C.b	Haul road agreement Section 4.3
2-117.F.1.f.iii	Private Roads	Page 4 & 7 Section B.a & C.c	Haul road agreement Section 4.3
2-117.F.14	Decommissioning	Page 8 Section E	Project Development Plan, Section 2.7 pages 5-6. Hughes County will defer to SD PUC but retain rights granted by Hughes County ordinance. Also reference NBWP Decommission Plan August 2021.

Section	Title	CUP Page & Section	Notes
2-117.F.1.f.iv	Control of Dust	Page 4 & 7 Section B.a & C.d	Section 2.5 in Haul Road Agreement.
2-117.F.1.g	Soil erosion and Sediment Control Plan	Page 4 Section B.f	Engineering will be completed and submitted with or prior to tower building permit applications.
2-117.F.2.a-b-c	Setbacks	Page 7 Section D	
2-117.F.3	Electromagnetic Interference	Page 4 Section B.g	
2-117.F.4	Lighting	Page 5 Section B.h	Project Development Plan Section 2.1 page 3 Will employ ADLS but applicant will adhere to requirements of FAA for each tower.
2-117.F.5	Turbine Spacing	Page 5 Section B.i	GE Manufacturer (placed according to manufacturer recommendations.)
2-117.F.6	Footprint minimization	Page 5 Section B.j	
2-117.F.7	Electric Cables	Page 5 Section B.k	Project Development Plan Section 2.3 page 4
2-117.F.8	Feeder Lines	Page 5 Section B.l	The application contains no specific information with regards to Feeder Lines. Final routes need to be submitted prior to construction.
2-117.F.9	Height from Ground Surface	Page 6 Section B.n	Project Development Plan Section 2.1 Table 1 page 3
2-117.F.10	Towers	Page 6 Section B.o	Project Development Plan Section 1.2 page 1 Project Development Plan Section 2.1 and Table 1 page 3
2-117.F.12	Permit Requirements		

Section	Title	Reference Page	Notes
	Utility Lines	Page 5 Section B.m	
	Maintenance	Page 6 Section B.q	Project Development Plan Section 2.5 page 5
2-117.F.11	Noise	Page 6 Section B.p Acoustic Assessment report.	<ul style="list-style-type: none"> Applicant states that noise will not to exceed 45dBA at the perimeter of any non-participating residences. NBWP has submitted evidence of one easement for noise filed with the Hughes County Register of Deeds on a participating landowner.
Not mentioned in Hughes County ordinance	Flicker	Flicker Impact Analysis Report	<ul style="list-style-type: none"> 10 Receptors are expected to experience any shadow flicker in Hyde and Hughes Counties. Highest non-participating receptor will experience 9:38 (hours:minutes per year.)
	Permit Expiration		2 years from issuance to complete substantial construction. Requests the county to interpret "Substantial Construction" to mean the pouring of 1 foundation in the project footprint.
	Maps and Easement Documentation	Page 8 Section D.i	Easements for setbacks and noise to be filed with the Hughes County Register of Deeds.
Powers and Jurisdiction Relating to Special Exceptions			
Section	Title	Date	Notes
1-111.E.b.i	Application Submitted	June 17, 2021	Application included in meeting materials.
1-111.E.b.ii	Notice Published in a paper	Published 7/14/22	Photocopy of newspaper notice is in meeting materials.
1-111.E.b.iii	Notice of Hearing Mailed	July 14, 2022	Copy of Notification mailing is in meeting materials.
1-111.E.b.iv	Public Hearing held	July 27, 2022	Public Hearing held on July 27, 2022 at 5:30 pm in the large court room on the third floor of the Hughes County Courthouse.
1-111.E.b.v	Finding of Empowerment		Hughes County Ord. 1997-3 Article 1, Section 1-111.E grants the Board of Adjustment the authority to decide on Conditional Use Permits.

Section	Title	Reference Page	Notes
1-111.E.b.vi(a)	Ingress and egress	Section C Roads	Enter Hughes County from Hyde County via negotiated County haul roads.
1-111.E.b.vi(b)	Parking, loading areas	Section C	Hyde County will host the locations for the operation headquarters and staging.
1-111.E.b.vi(c)	Refuse and service areas		O & M, laydown yard, and construction HQ, etc will be stationed in Hyde County.
1-111.E.b.vi(d)	Utilities	Section B	
1-111.E.b.vi(e)	Screening and buffering	Section D	
1-111.E.b.vi(f)	Signs and lighting		
1-111.E.b.vi(g)	Yards and open space	Section D	
1-111.E.b.vi(h)	General Compatibility	Section F	Board of Adjustment discretion following Hearing.
	Permit Expiration	Page 3 Section A.b	2 years from issuance to complete substantial construction. Requests the county to interpret "Substantial Construction" to mean the pouring of 1 foundation in the project footprint. This is different from past interpretation of this definition by the Board for other Wind Projects.
	Prescription of Conditions		Based upon Hearing and decision by the Board.

Other items:

- a. Applicant provided information regarding a permanent meteorological towers. Final locations are dependent upon final location of Turbines. Locations will be within Project Area, on land that is under lease and will meet County setbacks and requirements. The applicant requests the ability to move all towers up to 250 feet from current locations. Applicant agrees to provide proof of location compliance for all tower building permit applications submitted in Hughes County
- b. Applicant agrees to submit update to decommissioning plan required by ordinance. Conditional Use Permit Section E.i is intended to allow the South Dakota Public Utilities Commission the authority to oversee Decommissioning of this project while maintaining all the rights granted to Hughes County by ordinance to enforce decommissioning plan financial obligations.
- c. Applicant agrees to submit all required supporting documents with tower building permit application.
- d. Applicant agrees to obtain building permits prior to commencing construction on any towers.
- e. Applicant agrees to meet State and Federal requirements regarding permitting and interference with communications.
- f.

Staff Summary and Recommendation:

The applicant has provided documentation of its ability to meet the requirements of the zoning ordinance in reference to the proposed wind energy system. The Board may attach conditions to this request provided there is a logical reason to do so.