
STAFF MEMORANDUM SUPPORTING SETTLEMENT STIPULATION

TO: COMMISSIONERS AND ADVISORS
FROM: KRISTEN EDWARDS, DARREN KEARNEY, JOSEPH REZAC, AND JON THURBER
RE: DOCKET EL19-007 – IN THE MATTER OF THE APPLICATION OF TRIPLE H WIND PROJECT, LLC FOR A PERMIT OF A WIND ENERGY FACILITY IN HYDE COUNTY
DATE: MAY 21, 2019

Commission Staff (Staff) submits this Memorandum in support of the Settlement Stipulation (Stipulation) in the above-captioned matter.

BACKGROUND

On February 6, 2019, the South Dakota Public Utilities Commission (Commission) received a Facility Permit Application for an Energy Facility Permit (Application) from Triple H Wind Project, LLC (Triple H) a wholly-owned subsidiary of ENGIE North America, Inc. Triple H proposes to construct a wind energy facility to be located in Hyde County, South Dakota (Project). The Project would be located on 27,247.5 acres of privately held land, approximately 3.2 miles southwest of Highmore in the townships of Eagle, Chapelle, Highmore, and Holabird, South Dakota (Project Area). The total installed capacity of the Project would not exceed 250.24 megawatts (MW) of nameplate capacity. The proposed Project includes up to 92 wind turbine generators, access roads to turbines and associated facilities, underground 34.5-kilovolt (kV) electrical collector lines, underground fiberoptic cable, a 34.5-kV to 345-kV collection substation, one permanent meteorological tower, a 345-kV interconnection switching station, a Sonic Detection and Ranging Unit, and an operations and maintenance facility. The Project will interconnect to the high-voltage transmission grid via the Leland Olds to Fort Thompson 345-kV transmission line, which crosses the Project Area. Applicant has entered into two 30-year power purchase agreements, one with Walmart for 150 MW and one for 48 MW with a confidential institutional buyer. The remaining 52 MW will be sold on a merchant basis. The Project is expected to be completed in 2020. Applicant estimates the total cost of the Project to be \$300 million.

On February 7, 2019, the Commission electronically transmitted notice of the Petition and the intervention deadline of April 8, 2019, to interested individuals and entities on the Commission's PUC Weekly Filings electronic listserv. On February 12, 2019, the Commission issued a Notice of Application; Order for and Notice of Public Input Hearing; Notice of Opportunity to Apply for Party Status. On February 22, 2019, the Commission issued its Order Assessing Filing Fee; Order Authorizing Executive Director to Enter into Consulting Contract.

On March 19, 2019, the Commission held a Public Input Hearing in Highmore, South Dakota. No applications for Party Status were received by the Commission.

On May 21, 2019, Staff and Triple H filed a Joint Motion for Approval of the Settlement Stipulation.

STAFF'S ANALYSIS AND SETTLEMENT RESOLUTIONS

Staff reviewed the contents of the Application as it relates to the Energy Facility Siting statutes, SDCL 49-41B, and Energy Facility Siting Rules, ARSD 20:10:22. Staff then identified information required by statute or rule that was either missing from the Application or unclear within the Application and requested Triple H to provide or clarify that information. Staff also reviewed and considered the comments made at the Public Input Hearing and submitted to the Commission.

Staff consulted with multiple State Agencies to assist Staff with our review. Game, Fish, and Parks reviewed the potential impacts to wildlife and associated habitats. The State Historic Preservation Office reviewed the project to ensure historic properties are taken into consideration.

For approval, Triple H must show that:

- (1) The facility will comply with all applicable laws and rules;
- (2) The facility will not pose a threat of serious injury to the environment nor to the social and economic condition of inhabitants or expected inhabitants in the siting area;
- (3) The facility will not substantially impair the health, safety or welfare of the inhabitants; and
- (4) The facility will not unduly interfere with the orderly development of the region with due consideration having been given to the views of governing bodies of affected local units of government.

Triple H and Staff (jointly the Parties) positions were discussed thoroughly at several settlement discussions. As a result, some Party positions were modified and others were accepted where consensus was found. The Parties have resolved all issues subject to this proceeding except for the funding for the decommissioning of the Project and risks associated with ice throw and will notice these items for Commission consideration. Ultimately, the Parties agreed to 40 conditions on the construction, operation, or maintenance of the facility.

The Parties used the permit conditions from the Dakota Range Wind III permit, another project owned by ENGIE North America, Inc., as a starting point. Then the Parties modified the conditions based on the Commission's recent decision for the Deuel Harvest permit, Docket EL18-053, and the specific facts and evidence associated with this docket. Staff provides a summary of the Project non-participant impacts and specific conditions and will be available to discuss all stipulated permit conditions at the May 28 commission meeting.

PROJECT NON-PARTICIPANT IMPACTS

The combination of the rural nature of the Project Area and the conservative setbacks in Hyde County's zoning ordinance is mitigating many of the common concerns of non-participating residents. Hyde County requires a ½ mile setback from non-participating residences. For this

Project, only five non-participating residences are within 1 mile of the Project. The table below provides the sound and shadow flicker information for each residence:

NSR ID	Nearest Turbine	Distance to Turbine (ft)	Predicted Expected Shadow Flicker (Hours per Year)	Maximum Rotational Sound Level (dBA)
76	58	2,688	7:39:00	42
22	101	2,706	0:00:00	41
24	101	3,351	0:00:00	40
2	11	3,611	4:12:00	40
10	83	3,783	0:00:00	39

To summarize, only two non-participating residences are expected to receive any shadow flicker impacts, and four residences are predicted to experience sound levels at or above 40 dBA based on the conservative modeling submitted with the Application. As further explained in the sound section, an alternative sound modeling calculation shows all residences at or below Commission Staff’s design goal of 40 dBA.

To the best of Staff’s knowledge, the Commission has received no negative comments from non-participating residents near the Project Area at either the Public Input Hearing or submitted to the Commission. In this respect, this docket is unlike recent wind energy facility dockets before the Commission.

SOUND

The Parties agreed that the project will not generate a long-term average sound pressure level (Leq) of more than 45 dBA for all participants unless the owner of the residence has signed a waiver, consistent with the Hyde County ordinance. This condition also implements the post construction compliance testing method adopted in Docket EL18-053, except for Condition 26(b) as shown below:

Noise levels shall be measured continuously for at least two weeks, or until such time that a sufficient number of valid 10-minute Leq periods are acquired to determine compliance to a reasonable degree of scientific certainty. At a minimum, data must be collected for multiple 10-minute periods on at least two different nights when the nearest turbines are operating at full acoustic emissions, and background noise levels are sufficiently low such that the measured total noise level can be assumed to equal the turbine-only noise level ~~(ground wind speeds of approximately 2 m/s or less, and no presence of noise from traffic or other manmade sources)~~. *During the post-construction monitoring survey, windscreens will be used to protect microphones and minimize effects from self-generated wind-induced noise.*

Staff views the 45 dBA noise limit as a definite maximum at all residences. As an ideal design goal, Staff recommends 40 dBA at non-participating residences because that sound level is so low in absolute terms that complaints or issues with noise become quite rare. See Attachment B for a peer-reviewed article by Mr. David Hessler that supports Staff's noise limit and design goal recommendations.

While Triple H's modeling results show four non-participating residences at or above 40 dBA, the model includes a unilaterally applied 2 dB uncertainty factor, meaning that the predictions are somewhat conservative. Once this 2 dB uncertainty factor is removed from the prediction, all non-participating residences are at or below Staff's recommended design goal.

There are two participating residences with predicted maximum rotational sound levels above 45 dBA. By signing their lease, these residents have waived the noise protection provided in the Hyde County ordinance and the Parties proposed sound condition. Staff has concerns about potential noise impacts when sound levels exceed 45 dBA as the likelihood of complaints increase. Although not required through condition, Staff recommends the Applicant communicates the appropriate sound expectations with the owners of the residences with predicted sound levels exceeding 45 dBA and encourage the owners to visit a neighboring wind energy facility so they are aware of the sound level produced by comparable wind facilities.

WHOOPING CRANES

Since there is no federal nexus triggering the National Environmental Policy Act (NEPA) requirements for the Project, Staff and the South Dakota GF&P worked with Applicant on mitigation measures for whooping cranes. The Parties agreed to the following condition:

Applicant shall establish a procedure for preventing whooping crane collisions with turbines during operations by establishing and implementing formal plans for monitoring the project site and surrounding area for whooping cranes during spring and fall migration periods throughout the operational life of the project and shutting down turbines and/or construction activities within 1 mile of whooping crane sightings. The South Dakota Game, Fish, and Parks will be consulted on the procedure to minimize impacts to whooping cranes.

The Applicant also made training and communication commitments in response to Staff data request 5-1 (Attachment A, Page 41 – 43) to address potential impacts to whooping cranes. Given the Applicant's experience in operating wind energy facilities in the whooping crane migration corridor and their willingness to consult with the South Dakota GF&P, Staff believes the potential impact to whooping cranes will be minimized.

RECOMMENDATION

Through this settlement, the Parties are limiting the issues to be litigated through the evidentiary hearing. Staff recommends the Commission grant the Joint Motion for Approval of Settlement Stipulation and adopt the Stipulation without modification.