

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF SOUTH DAKOTA**

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**IN THE MATTER OF THE  
APPLICATION BY NORTH BEND  
WIND PROJECT, LLC FOR A PERMIT  
TO CONSTRUCT AND OPERATE THE  
NORTH BEND WIND PROJECT IN  
HYDE COUNTY AND HUGHES  
COUNTY, SOUTH DAKOTA**

**EL21-018**

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**TESTIMONY OF**

**TRICIA PELLERIN**

**ON BEHALF OF**

**NORTH BEND WIND PROJECT, LLC**

September 23, 2022

1 **Q. Please state your name and address for the record.**  
2  
3 A. Tricia Pellerin  
4  
5 **Q. Have you given Testimony previously in this matter?**  
6  
7 A. Yes I have.  
8  
9 **Q. Have you reviewed the testimony from staff witnesses and intervenor witnesses?**  
10  
11 A. Yes I have.  
12  
13 **Q. Do you have comments on any of that testimony?**  
14  
15 A. Yes I do have comments regarding the testimony from staff witnesses and intervenor  
16 witnesses.  
17  
18 **Q. Staff Witness Jon Thurber mentioned the possibility of conducting a post-  
19 construction sound survey for the North Bend Wind Project but North Bend feels  
20 such measurements should just be required if a consumer complaint occurs. How do  
21 you respond to that?**  
22  
23 A. As presented in the *Acoustic Assessment for the North Bend North Bend Wind Project*,  
24 the acoustic modeling results demonstrated that the Project successfully complies with  
25 the Hyde County Zoning Ordinance 45 dBA noise limit at all non-participating noise  
26 sensitive receptors (NSRs). It is also Tetra Tech's experience on approximately ten  
27 operational sound surveys that post-construction operational sound measurements  
28 typically indicate lower sound levels and/or ones that compare well with predictive  
29 modeling results conducted during permitting. With that in mind, and the cost associated  
30 with conducting a wind energy facility post-construction sound survey, Tetra Tech feels  
31 North Bend's proposal to limit post-construction sound measurements in response to a  
32 consumer complaint is reasonable.  
33 **Q. Intervenor Witness Mr. Dan Knox states he is concerned regarding the cumulative  
34 effect of sound at his residence produced by the North Bend Wind Project operating  
35 in conjunction with the Triple H Wind Project. Is his concern justified?**  
36  
37 A. Based on Tetra Tech's review of the Project NSR data, Mr. Dan Knox is associated with  
38 NSR IDs 11 and 14. Cumulative received sound levels were evaluated at NSR IDs 11 and  
39 14 for the North Bend Wind Project operating in conjunction with the Triple H Wind  
40 Project at maximum rotational wind speed under anomalous meteorological conditions.  
41 The cumulative received sound levels at NSR IDs 11 and 14 are anticipated to be 28 dBA  
42 and 38 dBA, respectively, which are well below Hyde County Zoning Ordinance 45 dBA  
43 noise limit.


1  
2 **Q. Intervenor Witness Mr. Dan Knox states that he is concerned about Project-related**  
3 **sound especially during the fall and winter months. He anticipates that sound from**  
4 **the Project will carry significantly more in the fall and winter months as opposed to**  
5 **the summer months.**

6  
7 **A.** The acoustic modeling analysis for the North Bend Wind Project was conducted using  
8 conservative assumptions, which mimic fall and/or winter leaf-off conditions.  
9 Furthermore, weather conditions favorable to sound propagation were used. The  
10 International Organization for Standardization (ISO) 9613-2 standard that is incorporated  
11 into the model unrealistically assumes that downwind conditions exist in all directions,  
12 between each wind turbine and each receptor simultaneously, which is physically  
13 impossible. Therefore, lower levels are expected in the upwind direction. In addition, the  
14 acoustic modeling algorithms essentially assume laminar atmospheric conditions, in  
15 which neighboring layers of air do not mix. This conservative assumption does not take  
16 into consideration turbulent eddies and micrometeorological variations that may form  
17 when winds change speed or direction, which can interfere with the sound wave  
18 propagation path and increase attenuation effects.

19 **Q. Intervenor Witness Mr. Michael Bollweg manages a hunting lodge called the**  
20 **Tumbleweed Lodge. Mr. Bollweg is concerned about Project-related sound at the**  
21 **lodge as well as potential adverse impacts to wildlife such as sharptail grouse and**  
22 **greater prairie chickens. Are those concerns warranted?**

23  
24 **A.** Based on Tetra Tech's review of the Project noise sensitive receptor (NSR) data, Mr.  
25 Michael Bollweg is associated with NSR ID 40. As described in the *Acoustic Assessment*  
26 *for the North Bend North Bend Wind Project* the calculated received sound level at NSR  
27 ID 40 is 33 dBA at maximum rotational wind speed under anomalous meteorological  
28 conditions, which is well below Hyde County Zoning Ordinance 45 dBA noise limit.  
29 The greater prairie chicken and sharptail grouse males make noises to attract a mate and  
30 environmental noise can interfere with that process; however, there is no prescribed noise  
31 limit or guideline to assess potential noise impacts on these species. At a received sound  
32 level of 33 dBA it is not expected that these species would be adversely affected by  
33 Project operational noise.

34  
35 Dated this 23<sup>rd</sup> day of September, 2022.  
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Tricia Pellerin