

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

**IN THE MATTER OF THE APPLICATION OF  
CROWNED RIDGE WIND II, LLC FOR A FACILITIES PERMIT TO  
CONSTRUCT A 300.6 MEGAWATT WIND FACILITY**

**Docket No. EL19-**

**DIRECT TESTIMONY AND EXHIBIT  
OF TYLER WILHELM**

**July 9, 2019**

**INTRODUCTION AND QUALIFICATIONS**

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**Q. PLEASE STATE YOUR NAMES AND BUSINESS ADDRESS.**

A. Tyler Wilhelm. My business address is 700 Universe Blvd., Juno Beach, Florida, 33408.

**Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

A. I am employed by NextEra Energy Resources, LLC (“NEER”) as a Senior Project Manager of Business Development at NEER. I am responsible for the development, permitting, community outreach, regulatory compliance, and meeting the commercial operations date (“COD”) for the 300.6 megawatt (“MW”) Crowned Ridge II wind generation project (“Project”). The Project’s COD is planned to occur in or before the third quarter of 2020.

**Q. WHAT IS THE ORGANIZATIONAL RELATIONSHIP BETWEEN NEER AND CROWDED RIDGE WIND II, LLC?**

A. Crowned Ridge Wind II, LLC (“CRW II”) is an indirect, wholly-owned subsidiary of NEER. NEER, through its affiliated entities, is the world’s largest generator of renewable energy from the wind and sun, generating over 19,000 MWs in 29 states and Canada. NEER affiliates in the State of South Dakota own the following wind facilities: Day County Wind, South Dakota Wind Energy Center, and Wessington Springs Wind.

**Q. PLEASE DESCRIBE YOUR PROFESSIONAL BACKGROUNDS.**

A. I have been employed by NEER since 2015, in the capacity of Land Services Representative, Associate Project Manager, Project Manager, and Senior Project



**OVERVIEW OF THE WIND FACILITY**

**Q. PLEASE DESCRIBE THE PROPOSED WIND FACILITY.**

A. The Project is situated within an approximately 61,000-acre Project Area spanning across parts of Codington County, Deuel County and Grant County, South Dakota. The Project will total approximately 300 MWs of installed capacity and will consist of 132 three bladed, horizontal-axis wind turbines, a collector substation, and an operations and maintenance (“O&M”) facility located approximately 11-miles north-east of Watertown, South Dakota.

The Project will utilize 117 GE 2.3 MW turbines with 116-meter (381-foot) rotor diameter and 90-meter (295-foot) hub height, and 15 GE 2.1 MW turbines with 116-meter (381-foot) rotor diameter and an 80-meter (262-foot) hub height. In the end, a maximum of 132 turbines in total will be constructed. To date, one alternate turbine location has been identified and if required will use GE 2.3MW with 116-meter (381-foot) rotor diameter and 90-meter (295-foot) hub height. An alternate turbine is included to provide flexibility through the permitting and construction process in the event an unforeseen condition arises during construction that indicates a primary turbine location should be dropped and the alternate turbine location activated.

CRW II requests that the permit allow turbines to be shifted within 250 feet of their currently proposed locations, with the understanding that any such shifts would still need to comply with setback and sound and shadow flicker thresholds and adhere to all applicable local, State, and Federal requirements. Although such shifts are not expected

1 to be needed, such flexibility would allow for CRW II to accommodate proposed shifts  
2 from local stakeholders and governing bodies where possible.

3  
4 **Q. WHO WILL BE RESPONSIBLE FOR OBTAINING ALL APPLICABLE  
5 FEDERAL, STATE, AND LOCAL PERMITS?**

6 A. CRW II will be responsible for obtaining all applicable federal, state, and local permits.  
7

8 **Q. HAVE ALL NECESSARY PROPERTY RIGHTS BEEN SECURED FOR THE  
9 WIND FACILITY?**

10 A. At this time the necessary property rights have been obtained by CRW II for 127 of the  
11 Project's 132 proposed turbine locations. CRW II anticipates all property rights to be  
12 obtained for the construction and O&M of the Project by September 18, 2019.

13 **DEVELOPMENT ACTIVITIES**

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15 **Q. PROVIDE AN OVERVIEW OF THE DEVELOPMENT ACTIVITIES.**

16 A. Development activities for the Project commenced in 2007. Over the past 10 years CRW  
17 II has been actively engaging stakeholders by working closely with landowners, tribal  
18 and local governments, and federal and state agencies to design the Project. Stakeholders  
19 have been approached directly to address concerns with the proposed siting and  
20 placement of the Project's infrastructure.

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22 CRW II conducted informational events on April 25, 2017 in the town of Gary located in  
23 Deuel County, on October 2, 2017 and on November 16, 2017 in the city of Watertown

1 located in Codington County. At these events, stakeholders were provided information  
2 pertaining to the status of the Project's development, current development activities in  
3 process within the Project Area, potential impacts to the Project's layout, and a  
4 permitting timeline.

5  
6 CRW II conducted a meeting with Deuel County officials (Deuel County Commissioners,  
7 Deuel County Planning and Zoning Officer and First District Association of Local  
8 Governments) on July 31, 2018 to discuss the requirements of the Deuel County siting  
9 and ordinances and the Project's compliance with the Deuel County siting ordinance.

10  
11 CRW II met with the Codington County Planner and First District Association of Local  
12 Governments on February 9, April 5, May 23, and August 31 of 2017 to discuss the  
13 requirements of the Codington County siting ordinances and the county's expectations  
14 throughout the development and construction of the Project.

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16 CRW II conducted meetings with Grant County officials (the Grant County  
17 Commissioners, the Grant County Planning and Zoning Officer, and the Grant County  
18 Auditor) on November 8, 2016 and December 20, 2016 as well as on January 17, April 4,  
19 June 6 and June 20 in 2017. As a result of these meetings, CRW II was able to better  
20 understand proposed changes to the Grant County zoning ordinance and how CRW II  
21 could proactively develop the Project to ensure compliance.

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1 Project team members have also engaged local utilities, including telecommunication  
2 utilities, to exchange general information on the Project, such as location of the Project  
3 Area and proposed Project infrastructure, and obtain documentation from the local  
4 utilities on the location of existing infrastructure within or adjacent to the proposed  
5 Project area. The information allows for CRW II to continue working with all necessary  
6 utilities to assess areas where interference could potentially occur, make necessary  
7 adjustments to minimize the chances of interference, design for underground crossing of  
8 existing utilities, as well as implement a mitigation plan to address how interferences  
9 would be cured through the operations and maintenance phase of the Project. This  
10 collaboration will continue through the Project's remaining development efforts and the  
11 construction process.

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13 Additionally, CRW II will continue its coordination with the Federal Aviation  
14 Administration ("FAA") to apply for the permitted use of an Aircraft Detection Lighting  
15 System ("ADLS"). Per Codington, Deuel and Grant County ordinances, towers will be  
16 marked as required by the FAA. There will be no lights on the towers other than what is  
17 required by the FAA. This restriction will not apply to infrared heating devices used to  
18 protect the monitoring equipment.

19  
20 The preferred manner of lighting by all counties is by using an ADLS. Subject to FAA  
21 approval, applicants will install an ADLS within one (1) year of approval by the FAA. In  
22 the event the FAA does not approve the use of an ADLS system, CRW II will comply  
23 with all lighting and markings otherwise required by FAA. CRW II initially filed for

1 Determinations of No Hazard with the FAA in December 2018 and received  
2 Determinations of No Hazard from the FAA for all proposed turbine locations in March  
3 2019. Since then, CRW II has conducted shifts to six turbine locations that require  
4 additional review by the FAA. The six remaining Determinations of No Hazard are  
5 expected to be received in or before the fourth quarter of 2019. The Applicant intends to  
6 apply for the use of an ADLS in the fourth quarter of 2019 once all Determinations of No  
7 Hazard have been received from the FAA.

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9 CRW will continue this collaborative process with landowners, tribal and local  
10 governments, and federal and state agencies throughout the development, construction  
11 and operation phases of the Project.

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13 **Q. PROVIDE THE STATUS OF THE LOCAL CONDITIONAL USE PERMITS.**

14 A. CRW II has obtained local Conditional Use Permits (“CUP”) for the Project from both  
15 the Codington County Board of Adjustment on July 16, 2018 and the Grant County  
16 Board of Adjustment on December 17, 2018. CRW II also obtained a local Special  
17 Exception Permit (“SEP”) from the Deuel County Board of Adjustment on October 22,  
18 2018.

19  
20 Although some alterations and improvements have been made to the locations of Project  
21 infrastructure since the awarded CUPs and SEP, CRW II will ensure that the Project’s  
22 final configuration will meet or exceed the setback distances, and noise and shadow  
23 flicker thresholds as required by the Codington, Deuel, and Grant County ordinances.

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**Q. WHAT ARE THE LOCAL SETBACKS REQUIRED IN THE CUP's AND SEP AND DOES THE WIND FACILITY COMPLY WITH THE SETBACKS?**

A. The Project meets or exceeds all local setback requirements as approved within the Codington and Grant County CUPs as well as the Deuel County SEP. The required setbacks are as follows for each county:

**Codington County Setback Requirements:**

- 550' from participating occupied residence, business, church, or school;
- 1,500' from non-participating occupied residence, business, church, or school (within all Districts other than Town Districts);
- 5,280' from non-participating occupied residence, business, church, or school (within Town Districts);
- 5,280' from Municipal Boundaries at the time of CUP Application;
- 110% of the height of the wind turbine from right-of-way of public roads;
- 110% the height of the wind turbines from any property line;
- Noise level generated by wind energy system shall not exceed 50 dBA, average A-weighted Sound pressure level effects at the property line of existing non-participating residences, businesses, and buildings owned and/or maintained by a governmental entity; and
- Flicker at any receptor shall not exceed thirty (30) hours per year within the analysis area for all schools, churches, businesses and occupied dwellings within a one (1) mile radius of each turbine within the Project.

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**Grant County Setback Requirements:**

- 1,500’ from participating residence, business, church, or school, building owner and/or operated by a governmental entity;
- 1,500’ from non-participating residence, business, church, or school, building owned and/or operated by a governmental entity;
- 5,280’ from municipal boundaries existing at the time of CUP Application;
- 500’ or 110% of the vertical height of the wind turbine, whichever is greater, from Public right-of-way;
- 500’ or 110% of the vertical height of the wind turbine, whichever is greater;
- Noise level shall not exceed 45 dBA, average A-weighted Sound pressure including constructive interference effects measured twenty-five (25) feet from the perimeter of the existing non-participating residences, businesses, and buildings owned and/or maintained by a governmental entity;
- Noise level shall not exceed 50 dBA, average A-weighted Sound pressure including constructive interference effects measured twenty-five (25) feet from the perimeter of participating residences, businesses, and buildings owned and/or maintained by a governmental entity; and
- Flicker at any receptor shall not exceed thirty (30) hours per year within the analysis area for all schools, churches, businesses and occupied dwellings within a one (1) mile radius of each turbine within the Project.

1        **Deuel County Setback Requirements:**

- 2        • 1,500' from existing participating residence, business, church, or school, building  
3            owner and/or operated by a governmental entity;
- 4        • 4 times the turbine blade height from existing non-participating residence, business,  
5            church, or school, building owned and/or operated by a governmental entity;
- 6        • 3-miles from the Lake Park District at Lake Cochran, 2-miles from the Lake Park  
7            District at Lake Alice, and 1-mile from the Lake Park District at Bullhead Lake;
- 8        • 1-mile from the nearest residence of municipalities of Altamont, Astoria, Brandt and  
9            Goodwin;
- 10       • 1.5-miles from the city limits of Gary, Toronto and Clear Lake (except Sections 11,  
11           12 &14);
- 12       • 110% of the turbine blade height from Public right-of-way;
- 13       • 110% of the turbine blade height from Property Lines (unless wind easement has  
14           been obtained from adjoining property owner);
- 15       • Noise level shall not exceed 45 dBA, average A-weighted Sound pressure at the  
16           perimeter of existing residences, for non-participating residences; and
- 17       • Flicker at any receptor shall not exceed thirty (30) hours per year within the analysis  
18           area for all schools, churches, businesses and occupied dwellings within a one (1)  
19           mile radius of each turbine within the Project.

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23    **Q.    ARE TURBINE, ACCESS ROAD, AND COLLECTOR LINE LOCATIONS**  
24    **COORDINATED WITH LANDOWNERS?**

1 A. Yes. CRW II conducted several meetings with landowners to discuss the proposed  
2 placement of project infrastructure and to take into consideration feedback from  
3 landowners. CRW II incorporated landowner feedback and made revisions to the site  
4 plan where feasible to help preserve the use of private lands and maintain compatibility  
5 with farming operations. For example, in some cases landowners preferred for CRW II to  
6 adjust the approaches and/or the alignment of turbine access roads to utilize existing  
7 farming approaches off of county roads or to avoid noted acreage that produces higher  
8 yields. CRW II also adopted changes to county setback requirements during the  
9 development process. Shifts to turbine placement were recommended, but could not  
10 always be adopted on a landowner's property due to a new setback requirement from a  
11 participating landowner's residence, minimum setback requirements from a nearby  
12 municipal boundary or natural and cultural constraints that may be present on the  
13 property.

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### **BENEFITS OF THE WIND FACILITY**

18 **Q. ARE THERE ANY BENEFITS ASSOCIATED WITH THE WIND FACILITY**  
19 **FOR SOUTH DAKOTA?**

20 A. Yes, South Dakota will benefit from the proposed Project. Specifically, the Project will  
21 produce the following benefits: (1) the delivery of 300.6 MWs of zero-emissions wind  
22 energy; (2) the creation of approximately 250 temporary construction jobs, which will  
23 include employing local workers if qualified and available; (3) supporting the local

1 economy through the purchase of regional goods and services, including increasing the  
2 use of hotels and restaurants in Codington, Deuel and Grant County; (4) the creation of  
3 7–12 permanent O&M jobs; (5) land lease payments to landowners of approximately \$40  
4 million over the contracted term of the project; and (6) approximately \$425 million in  
5 construction cost (i.e., capital) investment within the state of South Dakota. There are  
6 also tax benefits associated with the Project, which are set forth in Daryl Hart’s Direct  
7 Testimony.

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9 **Q. HOW MANY HOMES CAN BE SERVED BY THE CLEAN ENERGY THAT THE**  
10 **WIND FACILITY WILL DELIVER?**

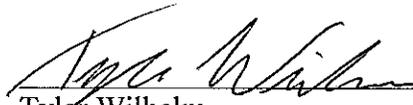
11 A. The Wind Facility will deliver enough energy to power more than 150,000 homes.

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13 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

14 A. Yes, it does.

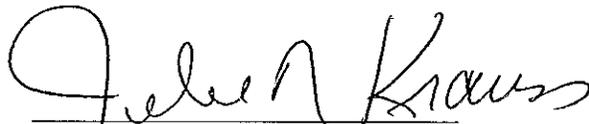
STATE OF FLORIDA                    )  
  ) ss  
COUNTY OF PALM BEACH         )

I, Tyler Wilhelm, being duly sworn on oath, depose and state that I am the witness identified in the foregoing prepared testimony and I am familiar with its contents, and that the facts set forth are true to the best of my knowledge, information and belief.

  
Tyler Wilhelm

Subscribed and sworn to before me this 3<sup>rd</sup> day of July 2019.

SEAL

  
Notary Public

My Commission Expires \_\_\_\_\_

