

March 22, 2021

VIA ELECTRONIC FILING: NDPSC@ND.gov

Mr. Steve Kahl  
Director of Administration  
North Dakota Public Service Commission  
State Capitol Building  
600 East Boulevard Avenue, No. 408  
Bismarck, North Dakota 58505-0480

RE: Case No. PU-05-47 – Request by Rugby Wind LLC for Extension of Light Mitigation Deadline for the Rugby Wind Farm.

Dear Mr. Kahl:

Please find the attached extension application with respect to the Rugby Wind Farm, located in Pierce County, North Dakota, which consists of this cover letter and the attached Application. Based on consultation with Commission Staff, our understanding is that electronic submission to the address above will satisfy the filing requirements as an accommodation for Covid-19 disruption to normal business practices. I make this filing on behalf of the applicant, Rugby Wind LLC. You can reach me at the following address:

Peter Landoni  
Asset Manager  
1125 NW Couch Street  
Portland, Oregon 97209  
[Peter.Landoni@avangrid.com](mailto:Peter.Landoni@avangrid.com)  
503-796-7162

Please feel free to have Public Service Commission Staff contact me with any questions.

Sincerely,

Peter Landoni

**STATE OF NORTH DAKOTA  
PUBLIC SERVICE COMMISSION**

In the Matter of the Application of  
Rugby Wind LLC for Extension of Light  
Mitigation Deadline for the Rugby Wind  
Farm

Case No. PU-05-47 – Application for  
Extension of Time

**I. Summary of Application for Extension of Time**

Rugby Wind LLC (“Rugby” or the “Applicant”) owns and operates the 149.1-Megawatt (MW) Rugby Wind Farm located in Pierce County, North Dakota. Rugby is comprised of 71 Suzlon S88 2.1 MW turbines and started commercial operation on December 23, 2009. Rugby was issued a certificate of site compatibility prior to June 5, 2016 and per N.D.C.C. Chapter 69-06-01 it must install functioning light-mitigation technology by December 31, 2021. There are currently two companies that have Federal Aviation Administration (“FAA”) approved radar-based technology aircraft detection lighting system (ADLS) that would work with the turbines at Rugby, DeTect’s Harrier ADLS and Terma ADLS. Vestas’ ADLS technology is not compatible with the turbines installed at Rugby. A third company is developing a light mitigation technology, Technostrobe Light Intensity Dimming Solution (“LIDS”) technology, that is currently being tested by the FAA, but is not approved at this time. Although LIDS technology was approved for use in Canada in June of 2020, the FAA approval previously expected in August of 2020 has been delayed.

To install a light-mitigation technology, Rugby must retrofit the lighting for its entire wind project and obtain local zoning approval to install a new lattice-structure tower if using a radar-based system (ADLS). After consulting with industry experts, stakeholders and manufacturers, Rugby recently determined that once approved by the FAA, LIDS is a viable solution for the conditions and circumstances extant at the Rugby Wind Farm. Rugby prefers to install the LIDS technology because it is roughly one quarter the cost of an ADLS system, does not require construction of a new tower, and because ADLS has not demonstrated as many light mitigation benefits to North Dakota as anticipated. However, because LIDS approval remains pending, and radar-based technology involves a significant lead time to manufacturer and deliver to the site, insufficient time exists to allow Rugby a choice of technology. Accordingly, Rugby Wind LLC submits this application pursuant to N.D.C.C. § 69-06-11-02 to provide the Commission with technical and economic considerations in support of an extension of time to comply with the light mitigation requirement. As discussed in more detail below, Rugby asks the Commission to extend the December 31, 2021 deadline for Rugby to December 31, 2022.

**II. The Applicant**

The Applicant, Rugby Wind LLC is an Oregon limited liability company formed in Oregon and authorized to do business in North Dakota. The Rugby Wind Farm supports its North Dakota community financially while generating clean, affordable electricity. Rugby is wholly owned by Avangrid Renewables, LLC, one of the leading providers of clean, renewable power in the U.S. with more than 7,000 MW of owned and

controlled wind and solar power facilities. The address for the Applicant and its parent company is 1125 NW Couch Street, Portland, Oregon 97209.

The North Dakota Public Utility Commission issued a Certificate of Site Compatibility (“CSC”) (Certificate No. 5) for the 149-MW Rugby Wind Farm on October 3, 2005, and re-issued the CSC on August 27, 2008. Rugby completed construction of the turbines and associated infrastructure, including FAA-approved lighting, in December 2009. The applicant is aware of no complaints received with regard to lighting since commencing operation.

### **III. Technology Evaluation**

The Department of Defense (“DOD”) Military Aviation and Installation Assurance Clearinghouse informally reviewed ADLS for the Rugby Wind Farm and determined in January 2021 that ADLS radar will have minimal impact on military operations conducted in the area, including military training routes (“MTRs”) located within the region of the Rugby Wind Farm.

The Applicant has investigated the technical feasibility and cost of installing Terma ADLS for light mitigation of aviation lighting at Rugby Wind Farm. Rugby has received a proposal and coverage analysis from Terma for installation of ADLS radar at the site. The site-specific coverage analysis has not been reviewed and approved by the FAA at this time because the exact location of the 50-meter (164 feet) tower for the ADLS radar needs to first be reviewed and approved by Pierce County. Based on discussions with Terma, it will take approximately seven months to manufacture and ship a radar system to the site, once Rugby places an order. Installation of the equipment requires that the up-tower cabinet be kept dry during installation, which can be weather sensitive. Besides the initial investment in the radar, the ADLS requires annual maintenance and service contracts. Based on information presented at PSC meetings in October and December of 2020, deployment of the ADLS system is reported to keep the lights on more often than expected (meaning, it provides no light mitigation), perhaps due to the effect of vehicle traffic on roads, farm machinery, and birds on the radar-based detection system. Given the higher cost and lower performance, it is prudent to consider alternative technologies.

Rugby also received a bid for a LIDS light mitigation system. The LIDS system has not been approved by FAA to date, but Technostrobe is hopeful that it will be approved in 2021. FAA needs additional validation “fly overs” to test the technology and then a technical note must be written. At this time, FAA pilots are not flying due to Covid-19. Once the system is approved by FAA, a Rugby site specific plan would be submitted to FAA for review and approval. LIDS technology does not require a separate lattice tower for radar because the lights are controlled at the wind tower and light intensity is adjusted based on visibility. Based on discussion with LIDS, the technology could be delivered to the site and installed within a few months.

LIDS requires minimal maintenance beyond what is required to operate and maintain the existing lighting system. Further, the LIDS system is not affected by vehicles, farm machinery or birds, and the cost of installing ADLS at the Rugby Wind Project is approximately four times greater than the cost of installing LIDS. Finally, it is worth noting that the PSC’s recent letter to the North Dakota congressional delegation expressed support of the technology, requesting that the delegation reach out to the FAA to assist with moving the approval process along.

#### **IV. Request for Extension**

The purpose of this Application for Extension of Time is to provide additional time for FAA review of the LIDS system. If an extension of time is not granted, then Rugby must immediately procure the more expensive ADLS system at roughly four times greater cost than LIDS. Rugby is not a public utility and cannot pass on the cost of installing and operating the light mitigation system to ratepayers. Similarly, it cannot increase revenue from customers for whom Rugby provides electricity pursuant to long term contracts. Accordingly, the full cost of the lighting upgrades must be absorbed by the applicant.

The applicant wishes to make an economic choice, but also the choice that provides the best cost to benefit ratio. In this case, LIDS appears to be more reliable because it requires minimal ongoing maintenance. Further, ADLS systems installed elsewhere are reported to provide light mitigation less than anticipated.

Even if the LIDS system is not approved by FAA with sufficient time to meet the extended deadline, if granted, the ADLS system requires at least 7 months of lead time to acquire the equipment before the system can be installed. A one-year extension would provide additional time for FAA review of LIDS. The extension of time will also provide Rugby with an opportunity to select and install a technology best suited to the circumstances. Because LIDS approval is estimated to occur during 2021, denying the extension would effectively preclude further evaluation of LIDS. Given the FAA's pending review, accounting for some variability in the timing of FAA's review, and avoiding a later request for a second extension, Rugby believes an extension of at least one year is appropriate. Accordingly, Rugby seeks a one-year extension of the deadline in N.D.C.C. 69-06-11-02(2). Rugby also respectfully requests the Commission consider and issue a decision on the extension as soon as is possible; if an extension is not granted by May, 2021, Rugby will be required to procure the ADLS system, despite the disadvantages described above.

#### **V. Conclusion**

The Commission is authorized to grant an extension of the deadline for installing light mitigation at the Rugby Wind Farm. North Dakota Administrative Rules § 69-06-11-02.2. Based on the foregoing summary of technical and economic feasibility for ADLS and LIDS, Rugby respectfully requests an extension of the December 31, 2021 deadline applicable to the Rugby Wind Farm by at least one year, to December 31, 2022.

Dated: March 22, 2021

/s/ Peter Landoni

Title: Asset Manager