

**Lein, Jerry R.**

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**From:** Brian R. Bjella <bbjella@crowleyfleck.com>  
**Sent:** Tuesday, May 17, 2016 4:42 PM  
**To:** Zachary E. Pelham  
**Cc:** Lein, Jerry R.; Matthew T. Collins; Casey A. Furey  
**Subject:** Brady Wind, Case Nos. PU-15-690 & PU-16-797:Responses of Brady Wind to Questions to Counsel  
**Attachments:** Pelham L01 - responses to emailed questions to counsel MHAJ MH (FINAL).pdf

Mr. Pelham-

In regard to the questions set forth in your email of May 7, 2016, attached please find the responses of Brady Wind.

Thank you.

Brian Bjella

**Brian R. Bjella**

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Bismarck, ND 58501

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**CROWLEY | FLECK** PLLP  
ATTORNEYS

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Response to 7 May 2016 request for additional information  
Public Service Commission  
Zachary Pelham, SAAG

111 PU-15-690 Filed 05/17/2016 Pages: 11  
Response to 7 May 2016 request for additional information  
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Zachary Pelham, SAAG

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May 17, 2016

Mr. Zachary E. Pelham  
Pearce & Durick  
314 East Thayer Avenue  
Bismarck, ND 58501

Dear Mr. Pelham:

In re: Brady Wind, LLC  
150 MW Wind Energy Center  
PSC Case No. PU-15-690

Brady Wind, LLC  
230 kV Transmission Line  
PSC Case No. PU-15-797

Our File No. 35-218-026

On May 7, 2016, you sent an email to counsel for Brady Wind, LLC and Concerned Citizens of Stark County. Please find Brady Wind's responses to the questions you posed below.

1. The one-mile setback for Highway 22 in the project area, was this part of the CUP granted by the county?

ANSWER: Yes. Due to comments expressed at the Stark County Planning & Zoning Commission meeting for the Dickinson Wind Project (the Stark County project that NextEra Energy Resources proposed in 2015 but was rejected by the county), during subsequent meetings with Stark County officials, and at a meeting with the mayor of Dickinson, all expressed concern of visual impact of wind turbines to the Old Red Trail, the Enchanted Highway, and other major highways leading into the City of Dickinson. County officials represented to Brady Wind that the setback of turbines off Highway 22 "protects the gateways into the community" and is of community value.

As a result of these communications, officials of Brady Wind indicated that they would voluntarily impose a one-mile setback for wind turbines from Highway 22. This commitment was included in the project presentation at the Stark County Planning &

Zoning Commission meeting for the Brady Wind Project. Please see attached an email from Steve Josephson, Stark County Planner, confirming the County's interest in a one-mile setback from Highway 22 and indicating that it would not permit siting turbines in that area.

The Conditional Use Application submitted to Stark County sets forth the one-mile setback from Highway 22, which CUP was approved. As a result, the approval from Stark County incorporates a one-mile setback from Highway 22. For Brady Wind to move turbines into the one-mile setback area, it would need to re-permit the project through Stark County, which is not possible given the December 31, 2016 deadline under the project's Power Purchase Agreement and given the County's representation that it will not allow turbines in this area.

2. On late-filed Exhibit 8, what are the turbine location/numbers for the 16 non-participating landowners where shadow flicker is anticipated to have an impact? Where are the affected inhabited dwellings of the non-participating landowners? Also, how does the potential removal of turbines 82, 83, and 84 impact shadow flicker?

ANSWER: Brady Wind has prepared an updated shadow flicker analysis as a result of the removal of turbines 82-84, which is attached hereto. This updated analysis identifies participating and non-participating landowners, and potential shadow flicker on occupied receptors. It also identifies the turbines which could potentially generate a shadow flicker at each residence. In conjunction with the map attached thereto, one can identify the receptors listed in the shadow flicker table.

The original shadow flicker analysis indicated that predicted shadow flicker at two non-participating receptors, while in compliance with the Commission's policy not to exceed 30 hours per year, did exceed 22 hours per year at one non-participating receptor and 27 hours per year at another non-participating receptor. While these shadow flicker results comply with the Commission's policy, Brady Wind has decided to drop one turbine—No. 17—and replace it with an alternate. As a result, the updated shadow flicker analysis indicates that Receptor No. 610057 will drop from 22 hours 24 minutes per year to 12 hours and 7 minutes; and that Receptor No. 610053 will drop from 27 hours 40 minutes per year to 16 hours 36 minutes.

3. Does Brady Wind understand that the bond obtained to satisfy Stark County does not equate to meeting the requirements under the PSC rules for decommissioning?

ANSWER: Yes. Brady Wind understands that it will have to comply both with the Stark County and Commission decommissioning requirements, and that the Commission has discretion to require a form of financial assurance separate from the bond to Stark County.

4. If complaints concerning noise are fielded, can an individual turbine or group of turbines be turned off for testing the noise?

ANSWER: Yes, individual turbines or groups of turbines can be turned off to test for noise.

5. Commissioner Christmann brought up Dr. Ollson's testimony concerning impact on health and that placement of a turbine within 1,000 feet of an occupied dwelling could have adverse impacts. Given the county setback requirement is 2,000 feet from an occupied structure, and the PSC's setback for a non-participating landowner's property line is 1.1 times the height of the turbine (about 500 feet), what is the company's position concerning locating turbines 1,000 feet from a non-participating owner's property line? Can turbines potentially be moved to accommodate this?

ANSWER: Initially, Brady Wind wishes to point out that for this project it will be applying the more restrictive setback requirement of Stark County, which is 2.5 times turbine rotor diameter from the property line of non-participating landowners. Given the turbine technology to be used for this project, the setback from the property line of non-participating landowners will be 845 feet. This is already farther than the Commission's required setback from the property line of a non-participating landowner, which based on the turbine height is 475 feet in this case.

In preparing its applications to Stark County and the Commission, Brady Wind applied the existing applicable regulations regarding setbacks and the turbines for this project have been sited pursuant to these regulations. To require a different setback at this stage without prior notice would be inconsistent with existing law.

Brady Wind reviewed the testimony of Dr. Chris Ollson referred to in this request. Brady Wind interprets Dr. Ollson's testimony of providing a general range (1,000 feet from a turbine) at which noise would get "anywhere close . . . to 55 decibels." Brady Wind submits that this testimony does not form the basis of determining that 1,000 feet from property lines is a setback required to protect health. Moreover, to now require a 1,000 foot distance from non-participating property lines based upon noise (dba levels) would also not be in conformance with the law, as this project has been sited to conform to the Commission's existing regulation of not to exceed 50 dba's at 100 feet from an occupied residence. Brady Wind has demonstrated through the studies submitted that this project complies with the Commission's existing rule on noise.

Brady Wind submits that applying the Stark County setback of 2.5 times rotor diameter, —845 feet from non-participating property lines—is more than adequate. In conjunction with Brady Wind's decisions to install the newly approved FAA radar lighting technology, to remove turbines 82-84 due to visual concerns, and to remove Turbine 17 due to shadow flicker effects – Brady Wind submits that this project not only complies with but exceeds all of the Commission's regulatory requirements and is protective of

public health. By its willingness to go above and beyond existing regulatory requirements, Brady Wind has affirmatively addressed concerns raised by area residents and the Commission.

Sincerely,

A handwritten signature in blue ink, appearing to read "BR Bjella", with a long horizontal flourish extending to the right.

Brian R. Bjella

bw  
Enc.

Melissa,

Highway 22 is a major transportation corridor and serves as a gateway into Stark County and the City of Dickinson. It became clear during the discussion regarding the proposed Dickinson Wind Farm in the Spring of 2015 that neither the general public nor Stark County wanted wind turbines within a mile of major roadways. During the development of the Brady Wind Farm representatives of Stark County informed NextEra that locating turbines within a mile of Highway 22 would not be allowed. As a result NextEra developed a map that did not show potential turbine locations within one mile of Highway 22.

Steve

**From:** Hochmuth, Melissa [<mailto:Melissa.Hochmuth@nexteraenergy.com>]

**Sent:** Thursday, May 12, 2016 9:35 AM

**To:** Steven Josephson <[Steven.Josephson@dickinsongov.com](mailto:Steven.Josephson@dickinsongov.com)>

**Subject:** Brady Wind - Highway Setback

Steve,

As you are aware, the Public Service Commissioners asked during the workshop last Friday about the 1-mile setback for turbines off Highway 22. We knew protection of major road corridors into Stark County and into Dickinson was of importance to the County from a community value and visual aesthetics perspective when we first started developing this project. While it was not included as a condition of our Conditional Use Permit, we committed to a 1-mile setback off Highway 22 during initial negotiations with the County for the project, and the layout that was approved by the County as part of our CUP included that 1-mile setback for turbines. Can you please confirm the importance of the corridor to the County, and the request for the project to use a 1-mile setback for turbines?

1

Thank you,

Melissa Hochmuth  
Project Director  
NextEra Energy Resources  
561.694.4638  
[Melissa.Hochmuth@nee.com](mailto:Melissa.Hochmuth@nee.com)



TO: NextEra Energy Resources, LLC  
 FROM: Tetra Tech, Inc  
 DATE: May 17, 2016  
 SUBJECT: Brady I Wind Energy Center – Shadow Flicker Analysis Predictions

Tetra Tech, Inc. was contracted by Brady Wind, LLC, a wholly-owned, indirect subsidiary of NextEra Energy Resources, LLC (NextEra), to analyze predicted shadow flicker hours/year at occupied receptors from the proposed Brady Wind Energy Center. **Table 1** shows shadow flicker impact predictions for occupied receptors based on the 4/4/16 Brady I turbine array with turbine 17 removed and Alt2 activated. The table also identifies participation status of receptor, and main turbines impacting receptor. Receptor and turbine locations are shown in the attached **Figure 1**.

**Table 1: Predicted Shadow Flicker Hours/Year at Occupied Receptors**

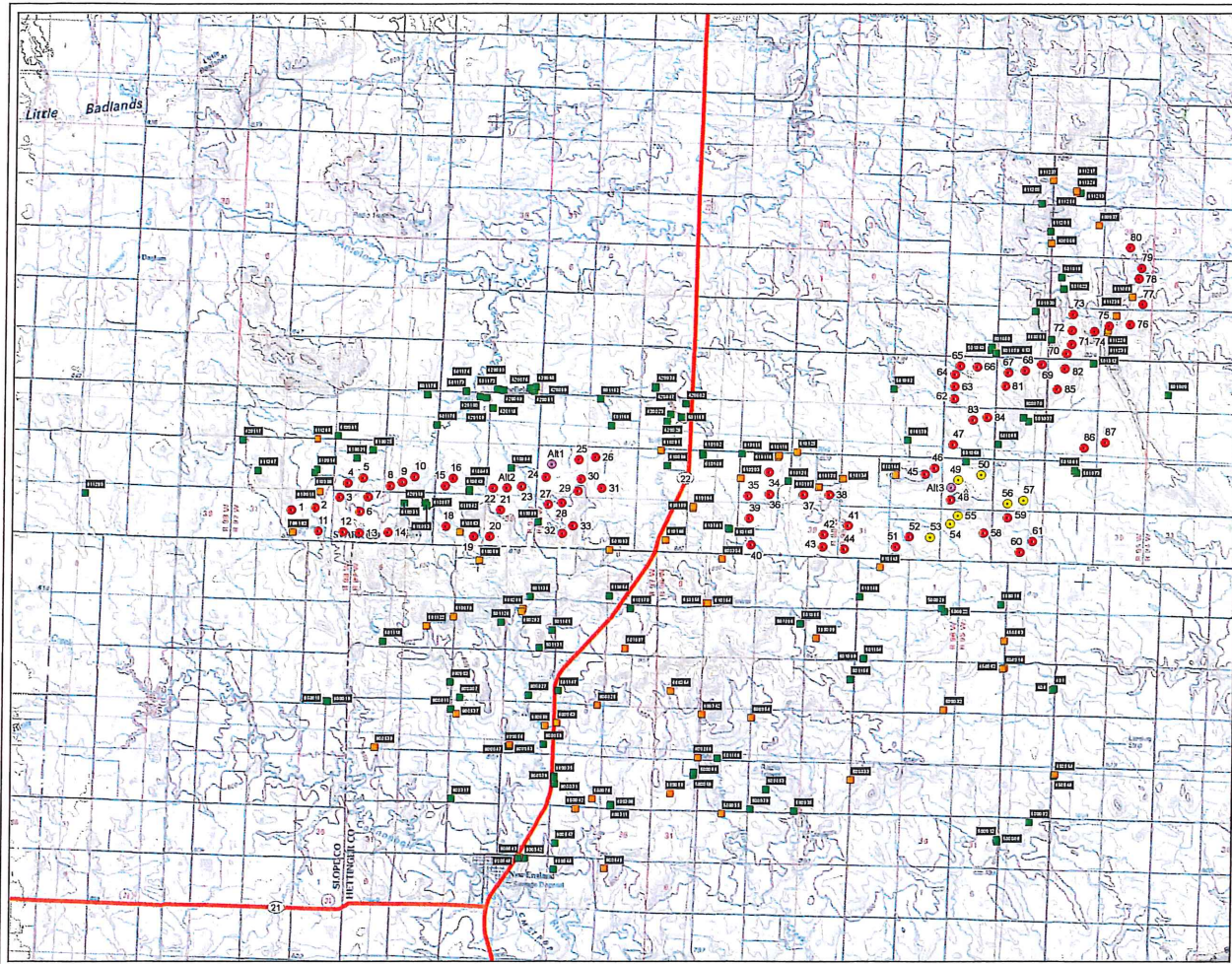
Receptor ID	Is Receptor a Project Participant?	Predicted Shadow Flicker (Hours per Year) - including Alternate Turbines	Predicted Shadow Flicker (Hours per Year) - Primary Turbines Only	Main Turbines Impacting Receptor
610121	Yes	52:56:00	52:56:00	34,37,36,35,38
880001	Yes	44:55:00	44:55:00	70,72,71,74
501068	Yes	21:59:00	21:59:00	50,46,45
610181	Yes	21:35:00	21:35:00	39,40
610049	Yes	21:33:00	21:33:00	22,15,21,16,Alt2
610042	Yes	18:27:00	18:27:00	22,15,21,18
610045	Yes	18:24:00	18:24:00	22,15,21,18
501059	Yes	17:57:00	17:57:00	66,68,65,64,69
610185	Yes	16:56:00	16:56:00	39,40
610053	No	16:36:00	16:36:00	18,8,14
501012	No	13:07:00	13:07:00	70,82,85
610057	No	12:07:00	12:07:00	18,8,14
501040	Yes	12:00:00	12:00:00	66,64,68,65
610031	No	10:52:00	10:52:00	5,7,15,6,18
610098	No	10:38:00	10:38:00	32,33,21
610009	No*	9:50:00	9:50:00	3,4,5
420119	No	8:36:00	8:36:00	8,14,18
501050	No*	7:50:00	7:50:00	64,68,65

Receptor ID	Is Receptor a Project Participant?	Predicted Shadow Flicker (Hours per Year) - including Alternate Turbines	Predicted Shadow Flicker (Hours per Year) - Primary Turbines Only	Main Turbines Impacting Receptor
501030	No	6:58:00	6:58:00	71,72,73
610094	No	5:09:00	3:27:00	24,22,Alt1
610111	Yes	4:13:00	4:13:00	34
610014	No*	3:56:00	3:56:00	4,5
610021	No*	3:54:00	3:54:00	8
900070	No	3:36:00	3:36:00	84,83
610139	No	3:35:00	3:35:00	46,47
501037	No	2:17:00	2:17:00	84
610025	No*	1:20:00	1:20:00	10
501065	No	0:59:00	0:59:00	47
420002	No	0:00:00	0:00:00	NA
420023	No	0:00:00	0:00:00	NA
420029	No	0:00:00	0:00:00	NA
420039	No	0:00:00	0:00:00	NA
420047	No	0:00:00	0:00:00	NA
420051	No	0:00:00	0:00:00	NA
420065	No	0:00:00	0:00:00	NA
420069	No	0:00:00	0:00:00	NA
420076	No	0:00:00	0:00:00	NA
420089	No *	0:00:00	0:00:00	NA
420090	No	0:00:00	0:00:00	NA
420100	No	0:00:00	0:00:00	NA
420108	No	0:00:00	0:00:00	NA
420116	No	0:00:00	0:00:00	NA
420117	No	0:00:00	0:00:00	NA
500002	No	0:00:00	0:00:00	NA
500006	No	0:00:00	0:00:00	NA
500012	No	0:00:00	0:00:00	NA
500018	No	0:00:00	0:00:00	NA
500022	No*	0:00:00	0:00:00	NA
500028	No*	0:00:00	0:00:00	NA
500035	No*	0:00:00	0:00:00	NA
500039	No	0:00:00	0:00:00	NA
500053	No	0:00:00	0:00:00	NA
500059	No	0:00:00	0:00:00	NA
500064	No	0:00:00	0:00:00	NA

Receptor ID	Is Receptor a Project Participant?	Predicted Shadow Flicker (Hours per Year) - including Alternate Turbines	Predicted Shadow Flicker (Hours per Year) - Primary Turbines Only	Main Turbines Impacting Receptor
501000	No*	0:00:00	0:00:00	NA
501019	No	0:00:00	0:00:00	NA
501022	Yes	0:00:00	0:00:00	NA
501073	No*	0:00:00	0:00:00	NA
501081	No*	0:00:00	0:00:00	NA
501082	No	0:00:00	0:00:00	NA
501085	No	0:00:00	0:00:00	NA
501096	No	0:00:00	0:00:00	NA
501099	No	0:00:00	0:00:00	NA
501104	No	0:00:00	0:00:00	NA
501108	No	0:00:00	0:00:00	NA
501118	No*	0:00:00	0:00:00	NA
501126	No	0:00:00	0:00:00	NA
501131	No	0:00:00	0:00:00	NA
501138	No	0:00:00	0:00:00	NA
501141	No	0:00:00	0:00:00	NA
501147	No	0:00:00	0:00:00	NA
501156	No*	0:00:00	0:00:00	NA
501162	No	0:00:00	0:00:00	NA
501165	No	0:00:00	0:00:00	NA
501168	No	0:00:00	0:00:00	NA
501172	No*	0:00:00	0:00:00	NA
501173	No	0:00:00	0:00:00	NA
501174	No	0:00:00	0:00:00	NA
501175	No	0:00:00	0:00:00	NA
501176	No*	0:00:00	0:00:00	NA
610001	No*	0:00:00	0:00:00	NA
610084	No	0:00:00	0:00:00	NA
610089	No*	0:00:00	0:00:00	NA
610102	No*	0:00:00	0:00:00	NA
610108	No*	0:00:00	0:00:00	NA
610149	No	0:00:00	0:00:00	NA
610170	No	0:00:00	0:00:00	NA
800308	No	0:00:00	0:00:00	NA
800311	No	0:00:00	0:00:00	NA

Receptor ID	Is Receptor a Project Participant?	Predicted Shadow Flicker (Hours per Year) - including Alternate Turbines	Predicted Shadow Flicker (Hours per Year) - Primary Turbines Only	Main Turbines Impacting Receptor
800317	No	0:00:00	0:00:00	NA
811201	No	0:00:00	0:00:00	NA
811205	No	0:00:00	0:00:00	NA
811210	No	0:00:00	0:00:00	NA
811287	No	0:00:00	0:00:00	NA
811290	No	0:00:00	0:00:00	NA
900002	No	0:00:00	0:00:00	NA
900007	No	0:00:00	0:00:00	NA
900011	No*	0:00:00	0:00:00	NA
900015	No	0:00:00	0:00:00	NA
900019	No	0:00:00	0:00:00	NA
900027	No	0:00:00	0:00:00	NA
900031	No	0:00:00	0:00:00	NA
900035	No	0:00:00	0:00:00	NA
900039	No	0:00:00	0:00:00	NA
900047	No	0:00:00	0:00:00	NA
900053	No	0:00:00	0:00:00	NA
900059	No	0:00:00	0:00:00	NA

\* Denotes receptor categorized as Not Participating because the receptor is located on land that is not covered by an easement. However, the landowner at these receptor are participants of the Project on property located elsewhere in the Project Area.



NEXTERA ENERGY  
 RESOURCES, LLC  
 BRADY WIND PROJECT  
 STARK COUNTY  
 NORTH DAKOTA

FIGURE 1  
 TURBINE AND RECEPTOR  
 LOCATIONS

MAY 2016

Proposed Turbine Array (4/4/2016)\*

- GE Xle 1.715-103 Turbine
- GE Xle 1.715-103 Turbine (Alt)
- GE Xle 1.79-100 Turbine

Receptors

- Occupied
- Not Occupied

\*Revised 4/4/2016 array shown with turbine #17 removed and Alt 2 activated.

0 0.5 1 1.5 2 MILES



REFERENCE MAP

