

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF THE APPLICATION BY CROCKER WIND FARM, LLC FOR A
PERMIT FOR A WIND ENERGY FACILITY AND A 345 KV TRANSMISSION LINE
IN CLARK COUNTY, SOUTH DAKOTA, FOR CROCKER WIND FARM

SD PUC DOCKET EL-17-055

PREFILED REBUTTAL TESTIMONY OF BRIE ANDERSON
ON BEHALF OF CROCKER WIND FARM, LLC

April 13, 2018

1 **I. INTRODUCTION**

2
3 **Q. Please state your name.**

4 A. My name is Brie Anderson.

5
6 **Q. Did you provide Direct Testimony in this Docket on December 15, 2017?**

7 A. Yes.

8
9 **Q. What is the purpose of your Rebuttal Testimony?**

10 A. The purpose of my Rebuttal Testimony is to provide an update on the Environmental
11 Assessment ("EA") being prepared for Crocker Wind Farm (the "Project") in
12 coordination with the U.S. Fish & Wildlife Service ("FWS"). In addition, I will respond
13 to testimony submitted by: Mr. Darren Kearney on behalf of the South Dakota Public
14 Utilities Commission Staff ("Staff") regarding cumulative impacts; Mr. Tom
15 Kirschenmann on behalf of Staff regarding offsets; Mr. Gale Paulson regarding
16 placement of turbines on FWS easements; and Mr. Sheldon Stevens regarding the
17 suitability of the site for wind development.

18
19 **II. FWS EA UPDATE**

20
21 **Q. Do you have an update to the environmental review process being conducted**
22 **by FWS for the Project?**

23 A. Yes. The FWS published the Draft EA on March 14, 2018, and is accepting public
24 comments until April 24, 2018. After the public comment period closes, the FWS
25 and Crocker will compile the administrative record and incorporate public comments
26 to finalize the EA. The Final EA is expected to be published in June 2018.

27
28 **III. RESPONSE TO STAFF TESTIMONY**

29
30 **Q. On pages 9-10 of his testimony, Mr. Kearney explains that Staff would like to**
31 **see more analysis of the Project's cumulative impacts with respect to**

1 **grasslands and siting this Project between the existing Day County Wind Farm**
2 **and Oak Tree Wind Farm. Please explain what a cumulative impacts analysis**
3 **is.**

- 4 A. Typically, a cumulative impacts analysis is a forward-looking analysis that looks at
5 the potential impacts of a proposed action in connection with other reasonably
6 foreseeable actions. For example, a cumulative impacts analysis for a highway
7 project might consider the impacts of other development that is likely to occur in the
8 same geographic area. However, as I understand Mr. Kearney's testimony, he is
9 interested in the impacts of this Project on grasslands when considered together
10 with two previously-existing wind farms.

11
12 **Q. What do you understand Mr. Kearney's concern to be regarding cumulative**
13 **impacts and grasslands?**

- 14 A. As I understand Mr. Kearney's testimony, it appears that he is concerned about
15 habitat fragmentation of potentially undisturbed grasslands ("PUDL"). In the context
16 of wind farm development, habitat fragmentation is related to the siting of access
17 roads, which could bisect existing, larger areas of habitat. Wind turbines themselves
18 do not generally pose the same concern for habitat fragmentation because they are
19 not linear.

20
21 **Q. Has the Applicant considered the Project's potential impact on PUDL?**

- 22 A. Yes. First, Crocker did desktop surveys of the Project Area using South Dakota
23 State University's 2013 study regarding PUDL in eastern South Dakota (Bauman et
24 al., 2016). Second, as recommended by that study, Crocker conducted on-the-
25 ground natural community classification and land use assessments of the
26 environmental survey corridor. The assessment evaluated plant species diversity
27 (high, medium, and low), grazing intensity (light, moderate, and heavy), and
28 community composition (native, native and non-native, and non-native) to give each
29 patch an overall quality score. Land use was also noted to reflect the most current
30 uses in the survey corridor.

1 These analyses were taken into account in Project design. For example, Crocker
2 has maximized siting of access roads along already-existing linear infrastructure,
3 such as roads. In addition, Crocker, with input from FWS and South Dakota Game,
4 Fish and Parks ("GFP"), shifted turbines closer to PUDL edges to minimize the
5 associated access road lengths, and sited access roads to avoid and minimize
6 fragmentation. As depicted in Table 9-11 of the Facility Permit and the attached
7 Figure 2, the Crocker Wind Project will not permanently impact high quality PUDL
8 and will temporarily impact only 0.1 acres of high quality PUDL.
9

10 **Q. Did you undertake additional analysis in response to Mr. Kearney's**
11 **testimony?**

12 A. Yes. Crocker conducted additional analysis to assess potential cumulative impacts
13 on grasslands with the addition of the Project between the existing Day County Wind
14 Farm to the north and Oak Tree Wind Farm to the south. Crocker again used South
15 Dakota State University's 2013 study regarding PUDL in eastern South Dakota to
16 conduct the analysis; it is important to note that only desktop data was available for
17 the existing wind farms. Crocker does not have land rights to conduct field surveys,
18 nor are field surveys typically conducted on third-party existing project sites. As a
19 result, we have more detailed data for Crocker than we do for the existing wind
20 farms.
21

22 As I noted above, access roads would be the primary concern for habitat
23 fragmentation in a wind farm. To assess potential fragmentation to PUDL from the
24 existing Day County and Oak Tree Wind Farms, Crocker digitized access roads to
25 turbines using 2016 aerial photography. The results of this effort are shown on
26 **Exhibit 1**. Because the Oak Tree Wind Farm had only one access road crossing a
27 small sliver of PUDL, it does not appear to be a concern for habitat fragmentation
28 and was not considered further in this analysis. However, access roads intersected
29 with PUDL alone do not provide a clear perspective on potential fragmentation.
30 Rather, siting of access roads along existing linear corridors such as field edges, two
31 tracks, and roads can reduce fragmentation. In some cases, this may have resulted

1 in more acres of impact due to a longer route; however, the habitat impacted is
2 generally of lower quality because it is located on the edge of the habitat.

3
4 Review of access roads in PUDL for the Day County Wind Farm indicates use of
5 existing roads to the extent practicable and where access roads are sited in PUDL,
6 they are not bisecting large tracts (i.e., splitting into multiple smaller tracts). Rather,
7 they follow edges of PUDL or, if they do split a contiguous PUDL tract, the resulting
8 pieces are generally greater than 40 acres. This is similar to Crocker, where, as
9 discussed above, turbines and access roads have been sited to avoid impacts to
10 PUDL, especially high quality PUDL. As shown on **Exhibit 2**, based on analysis
11 conducted for the Project, most access roads are sited in low quality PUDL. As
12 such, based on my analysis, the cumulative impact of the Project and the two
13 existing wind farms will not have a significant or negative impact on habitat, and will
14 not substantially increase habitat fragmentation in the area.

15
16 Bauman, P., B. Carlson, T. Butler. 2016. Quantifying Undisturbed (Native) Lands in
17 Eastern South Dakota: 2013. South Dakota State University ("SDSU") Extension.
18 Available online at: https://openprairie.sdstate.edu/data_land-easternSD/1/.
19 Accessed December 2017.

20
21 **Q. On pages 9-10 of his testimony, Mr. Kirschenmann discusses potential**
22 **"mitigation considerations," including "using tools developed to calculate**
23 **acres of habitat to be restored or created." Are offsets required outside of the**
24 **FWS easement exchange process?**

25 A. No. Mr. Kirschenmann appears to be referencing potential acreage offsets for
26 Project impacts on certain habitat. For example, as part of its process for
27 considering the placement of turbines on its easements, FWS requires a 1:1 offset
28 for permanent impacts on its grassland easements. For this Project, Crocker has
29 voluntarily agreed to a 2:1 offset for impacts to FWS grassland easement lands.
30 However, I am not aware of such a policy or regulation in South Dakota on private

1 property, absent a federal property or permitting interest. In fact, Mr. Kirschenmann
2 confirmed in his testimony that South Dakota does not have a state mitigation policy.

3
4 Further, the two decision support tool studies cited by Mr. Kirschenmann on page 10
5 of his testimony do not contain a model or tool for analyzing potential impacts. In
6 addition, the studies have not been peer-reviewed, the results are inconsistent with
7 other similar grassland bird and waterfowl studies, and Mr. Kirschenmann states that
8 South Dakota does not endorse either study or the resulting products. As such, I do
9 not think it would be appropriate to use those studies as a basis for calculating or
10 conditioning offsets for any project.

11 12 **IV. RESPONSE TO INTERVENOR TESTIMONY**

13
14 **Q. Mr. Paulson states that he does “not think wind towers should be allowed on**
15 **land that is in grassland or wetland easements” (lines 201-02). Do you have a**
16 **response?**

17 A. Yes. FWS is the decision-maker for siting turbines on FWS easement lands, and
18 FWS has established a process for doing so. As part of this process, Crocker has
19 engaged in extensive consultation with FWS and, as a result of such consultation,
20 has reduced its impact from 41 turbines to 14 on grassland easements. To date,
21 there are nearly 1.5 million acres of grassland easements in the Prairie Pothole
22 Region of the Mountain-Prairie Region. The Crocker Wind Farm proposes to
23 permanently impact 15.1 acres of grassland easements and will offset this impact at
24 a 2:1 ratio.

25
26 **Q. At lines 112-16 of his testimony, Mr. Stevens discusses an irrigation system in**
27 **Section 22 of Woodland Township and Clark Rural Water. Do you have a**
28 **response?**

29 A. Yes. The Rural Water Systems lines depicted on Figure 13 of the Facility Permit
30 Application were provided by Terry Kaufman, Manager of the Clark Rural Water
31 System. The call-out box in the lower right corner of the figure references no

1 irrigated lands (i.e., center-pivot irrigation) within the Project Area. This has been
2 confirmed on aerial photography and in the field.

3
4 **Q. At lines 191-201 of his testimony, Mr. Stevens asserts that “much of the**
5 **grassland is native prairie” and, as a result, the Crocker area is not suitable**
6 **with a wind project. Do you have a response?**

7 Yes. Mr. Stevens’ statement that “much of the grassland is native prairie” is
8 inaccurate. As described above and in Section 9.3.1 of the Facility Permit, the U.S.
9 Geological Survey GAP Vegetation data indicates the Project Area is predominantly
10 agricultural (54.2 percent), which includes hay/pasture, cultivated cropland, and
11 managed tree plantation. Additionally, Crocker conducted on-the-ground natural
12 community and land use assessments to determine the quality of pasture and
13 grassland and its use. Native prairie is defined as grassland that has not undergone
14 mechanized clearing and contains native species. Based on the natural community
15 assessment, impacts to grasslands are primarily to those with low to moderate
16 quality scores due to the predominance of heavy grazing and non-native species
17 (Table 9-11 in the Facility Permit). Impacts to potential native prairie are limited to
18 0.1 acres of temporary impact. Based on FWS and GFP coordination, Crocker has
19 maximized turbine placement in cultivated fields while balancing setbacks and other
20 constraints, and prioritized avoiding impacts to areas identified as high quality. As
21 displayed in Table 9-10 of the Facility Permit, 65 percent of the Project’s permanent
22 and temporary impacts (102.5 acres and 1,193.8 acres, respectively) are to USGS
23 GAP agricultural vegetation classes (hay/pasture, cultivated crops, and managed
24 tree plantation). Given the avoidance and minimization measures implemented, the
25 presence of native prairie does not render the site unsuitable for wind development.

26
27 **V. CONCLUSION**

28
29 **Q. Does this conclude your Rebuttal Testimony?**

30 A. Yes.

1 Dated this 13th day of April, 2018.

2

Handwritten signature in black ink, appearing to read "Brie Anderson".

3

4 Brie Anderson