

**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  
OF A WIND ENERGY FACILITY AND A 345 KV TRANSMISSION LINE IN CLARK  
COUNTY, SOUTH DAKOTA, FOR CROCKER WIND FARM

EL17-055

**PREFILED TESTIMONY OF GALE PAULSON**

ON BEHALF OF INTERVENORS

1 **Q: Please state your name.**

2 A: Gale Paulson

3

4 **Q: Please describe your education and business experience.**

5 A: I received a Bachelor of Science degree in Agricultural Engineering from South Dakota State  
6 University. I am half-owner and President of PS International, Inc. PS International, Inc. designs,  
7 manufactures, and sells environmental protection equipment, mostly for wastewater  
8 treatment, for power plants throughout the world.

9

10 **Q: Do you own property near the proposed Crocker Wind Farm?**

11 A: Yes. I own property on the north, east, and south side of the Reid Lake Waterfowl Refuge,  
12 also known as the Round/Reid Lake Complex (Refuge). I also own a few hundred acres of land  
13 which is under water and is now part of the Round/Reid Lake Complex. I own a home on a bluff  
14 that overlooks the Refuge.

15

16 **Q: What is the Round/Reid Lake Complex Waterfowl Refuge?**

17 A: The Refuge is located approximately ten miles north of Clark, South Dakota. Because water  
18 from both Round Lake and Reid Lake are now connected, the South Dakota Game, Fish and  
19 Parks refers to this body of water as the Round/Reid Lake Complex. The Refuge is located in the

20 central flyway – the bird migration route that generally follows the Great Plains in the United  
21 States and Canada.

22

23 **Q: Describe your property?**

24 A: Some of my land is enrolled in grassland easement, some is in wetland easement, some is  
25 hay ground, and some is tilled for crops. My son farms the land and I help him out as much as  
26 possible.

27

28 **Q: Are you familiar with this area:**

29 A: Yes. I was born and raised on a farm on the northwest side of the Refuge, and I still own  
30 some of the land from the farm I grew up on. Over the years I purchased other land around  
31 Reid Lake from my uncles. I do a lot of hunting and have hunted the area around Round Lake  
32 and Reid Lake since I was able to purchase a hunting license when I was ten years old. I am now  
33 66, going on 67.

34

35 **Q: Do you think that the Round/Reid Lake Complex Waterfowl Refuge is a well-used and  
36 important refuge for waterfowl?**

37 A: Yes. Because it is located in the central flyway, thousands of migrating geese and ducks make  
38 their annual stop at the Refuge. This contributes to the excellent waterfowl hunting in this area.

39

40 **Q: Do you think that the Crocker Wind Farm will have a detrimental effect on the waterfowl**  
41 **and hunting in this area?**

42 A: Yes, especially the wind towers located within 3 miles to the south, southwest, west, and  
43 northwest of the Round/Reid Lake Complex Waterfowl Refuge.

44

45 **Q: Why do you think towers in these areas will cause a problem?**

46 A: These are the directions that geese and ducks most often fly when going out to feed. I know  
47 what fields that geese and ducks have fed in for years, and they use these same fields every  
48 year. The geese and ducks normally leave the refuge to feed twice a day, morning and evening.  
49 They often do not return to the refuge until after dark. Geese and ducks travel in flocks of  
50 thousands, and these large flocks would be traveling directly into areas where wind towers are  
51 proposed – in fact, the ducks and geese feed in the exact fields where some towers are  
52 proposed.

53

54 **Q: Do you think Crocker wind Farm, LLC (Crocker) took the Round/Reid Lake Complex**  
55 **Waterfowl Refuge and the thousands of ducks and geese that use this refuge into**  
56 **consideration when siting the wind towers?**

57 A: Crocker did not consider it adequately. As I have noted, I grew up in this area and have  
58 hunted this area my entire life. I think I am as familiar with this area and the wildlife in this area  
59 as anyone, but please note the following:

60 • In a March 14, 2016 letter regarding the Crocker Wind Farm, Silka Kempema, Terrestrial  
61 Wildlife Biologist for the SD Game, Fish and Parks (SDGFP) makes the following  
62 statements: “The proposed siting and operation of a wind farm has the potential to  
63 directly and indirectly impact area wildlife. This may occur by altering habitats,  
64 influencing behavior, and directly killing individuals. The South Dakota Game, Fish and  
65 Parks in coordination with the South Dakota Bat Working Group developed *Siting*  
66 *Guidelines for Wind Power Projects in South Dakota.*” In the summary, she states: “Our  
67 agency has concerns regarding direct and indirect impacts to wildlife and habitats in  
68 association with the siting of the proposed project.”

69 • The siting guidelines that Ms. Kampema refers to contain the following statements:  
70 “Careful consideration should be given to the impact of wind power projects in areas  
71 that are unique/rare in South Dakota, such as the Coteau des Prairies, Missouri River,  
72 and Prairie Pothole Regions” and “In some instances, the impact wind turbines have on  
73 birds, bats, and other sensitive biological resources can be adequately mitigated.  
74 However, Wind development may be inappropriate in certain areas in South Dakota.”

75 • Scott Larson, Field Supervisor, South Dakota Field Office, United States Department of  
76 Interior Fish and Wildlife Service wrote two letters in 2016 (May 18 and November 29)  
77 regarding the Crocker Wind Farm. The May 16<sup>th</sup> letter contained the following  
78 statement: “In accordance with Executive Order 13186 regarding migratory bird  
79 protection, we recommend avoidance, minimization, and finally compensation to

80 reduce the impacts to species protected by the MBTA (Migratory Bird Protection  
81 Treaty)." The November 29<sup>th</sup> letter reiterates issues of the May 16<sup>th</sup> letter and states: "In  
82 short, the Crocker Wind Farm appears to be in a high wildlife use area and the proposed  
83 boundary expansion appears to exacerbate, rather than alleviate, direct and indirect  
84 risks posed to wildlife should the project be constructed as currently proposed." These  
85 letters also refer to the recommendations in the *US Fish and Wildlife Service Land-Based*  
86 *Wind Energy Guidelines*.

- 87 • The above mentioned *US Fish and Wildlife Service Land-Based Wind Energy Guidelines*  
88 contains the following statements: "The mission of the U.S. Fish and Wildlife Service is  
89 working with others to conserve, protect, and enhance fish, wildlife, plants and their  
90 habitats for the continuing benefit of the American People. As part of this, the Service  
91 implements statutes including the Endangered Species Act, Migratory Bird Treaty Act,  
92 and Bald and Golden Eagle Protection Act. These statutes prohibit taking of federally  
93 listed species, migratory birds, and eagles unless otherwise authorized."
- 94 • "The Migratory Bird Treaty Act (MBTA) is the cornerstone of migratory bird conservation  
95 and protection in the United States. The MBTA implements four treaties that provide for  
96 international protection of migratory birds. It is a strict liability statute, meaning that  
97 proof of intent, knowledge, or negligence is not an element of an MBTA violation. This  
98 statute's language is clear that actions resulting in a "taking" or possession (permanent

99 or temporary) of a protected species, in the absence of a Service permit or regulatory  
100 authorization, are a violation of the MBTA.”

101 • “Wind energy development in some areas may be precluded by federal law; other areas  
102 may be inappropriate for development because they are recognized as having high  
103 wildlife value based on their ecological rarity and intactness.”

104 • “As with all responsible energy development, wind energy products should adhere to  
105 high standards for environmental protection. With proper siting, operations, and  
106 management of projects, it is possible to mitigate for adverse effects to wildlife and  
107 their habitats.”

108 • This USFWS Guideline suggests that the following questions be asked:

109 - *Are there known critical areas of wildlife congregation including, but not limited to*  
110 *maternity roosts, hibernacula, staging areas, winter ranges, nesting sites, migration*  
111 *stopovers or corridors, leks, or other areas of season importance?*

112 - *If the answer is yes, the developer may consider abandoning the area or identifying*  
113 *possible means by which the project can be modified to avoid or minimize potential*  
114 *significant impacts. Additionally the Guideline states, For some species, movements*  
115 *between foraging and breeding habitat or between sheltering and feeding habitats,*  
116 *occur on a daily basis. Consideration of daily movements(morning and evening;*  
117 *coming and going) is a critical factor when considering project development.*

118

119 Based on the above referenced documents and statements, it seems the South Dakota Game,  
120 Fish and Parks and the United States Fish and Wildlife Service had the same concerns that I do  
121 regarding the siting of this Crocker Wind Farm. Both agencies appear to have concerns about  
122 the development of a wind farm in the unique/rare area and specifically express concerns  
123 regarding the potential damage to waterfowl in the area. In particular, the USFWS Siting  
124 Guidelines appear to have major concerns for an area such as the area around Reid Lake  
125 Waterfowl Refuge. Their siting guideline states that wind developers need to be very concerned  
126 about waterfowl migration stopovers and corridors – and especially note that some species  
127 move between sheltering and resting areas twice a day. The Guideline states that this is a  
128 critical factor when considering project development. Their first recommendation is  
129 mitigation/avoidance of such areas and abandonment of the site if adequate mitigation  
130 avoidance cannot be accomplished.

131

132 Based on my knowledge and experience from growing up, hunting, farming, etc. in this area,  
133 and on the above statements/recommendations of the SDGFP and the USFWS, I would  
134 recommend that no towers be located within 3 miles of Round/Reid Lake. At the very least  
135 I would strongly recommend that the twelve (12) southernmost towers near the Round/Reid  
136 Lake Complex be removed from the project. According to the latest map that I have seen, these  
137 would be towers 112, 113, 114, 115, 118, 119, 120, 67, 66, 63, 81, and 82.

138



139 **Q: After reviewing the Application, how did Crocker address the above concerns?**

140 A: In my opinion, not very thoroughly nor accurately. Please note that Crocker provided a  
141 publication titled *Crocker Wind Farm: Bird and Bat Conservation Strategy* prepared by Western  
142 EcoSystems Technology, Inc. (WEST) dated February 19, 2018. This WEST document makes the  
143 following statements: "Wildlife congregates within the Project area based on publicly available  
144 data, specifically around lakes and other open waterbodies during peaks in waterfowl migration  
145 through the area. These resources do not appear to be in higher density in the Project area  
146 than the surrounding landscape." "The area is likely to be used by relatively high numbers of  
147 waterfowl, although risk to this avian group from wind projects appears to be relatively low."

148

149 The above statements do not make a lot of sense and certainly appear to just ignore this very  
150 important issue. Saying that the waterfowl does not appear to be a higher density in the Project  
151 area than in surrounding areas certainly does not alleviate the problems caused by the towers  
152 in the project area. Additionally, my experience is that this is not a correct statement. The  
153 thousands of ducks and geese that migrate and stop at the Refuge feed in the direction of the  
154 Project most of the time. Stating that the area is used by relatively high numbers of waterfowl,  
155 but indication that the risk is low appears to be contrary to the concerns expressed by both the  
156 SDGFP and the USFWS.

157

158 Additional statements regarding waterfowl from this WEST document include:

- 159 - "Overall, no obvious waterbird/waterfowl flyways were observed beyond a general  
160 relatively high use in multiple directions across the Project, particularly during  
161 spring."
- 162 - "Northeastern South Dakota is known for significant activity during the waterfowl  
163 migration, and waterfowl and waterbird activity was documented at the site during  
164 avian use surveys conducted during the spring 2016 migratory period."
- 165 - "Given the data collected during the survey the Project's location in the Prairie  
166 Pothole region, it appears that the Project will have higher use by waterfowl in  
167 spring, followed by summer."
- 168 - "Crocker conducted surveys at two sites at Reid Lake to determine bald eagle use of  
169 the lake during fall migration in 2017."

170

171 The above statements show how poor and incomplete this WEST document prepared for the  
172 Crocker Wind Farm is. The only mention of Reid Lake in the document is that bald eagle surveys  
173 were conducted there. In fact, the document does not even note that Reid Lake is a Waterfowl  
174 Refuge. The statements about high waterfowl numbers in the spring and summer are way off  
175 base. The Refuge hosts thousands upon thousands of migrating ducks and geese every fall, and  
176 this is why this area provides such good waterfowl hunting. In my opinion this document is  
177 misleading regarding this area.

178

179 In addition to the above mentioned WEST document, Crocker released a Crocker Wind Farm  
180 Draft Environmental Assessment on March 14, 2018. This document also contains inaccurate  
181 and incomplete information and seriously downplays the importance of the Round/Reid Lake  
182 Complex Waterfowl Refuge and the thousands of migrating ducks and geese that use this  
183 refuge and feed within the Project area. As this is a draft document, I will send comments  
184 regarding that document to the USFWS.

185

186 **Q: Do you have additional concerns regarding negative effects of the Crocker Wind Farm on**  
187 **wildlife?**

188 A: Yes. In addition to the effects on migrating ducks and geese, the wind farm would have  
189 effects on eagles. Throughout the year I have seen eagles on my land (usually on the north side  
190 of the Refuge), and during the fall waterfowl migration I see many eagles in the Refuge area. I  
191 have seen as many as 100 in a single day. Eagles follow the migrating waterfowl and also spend  
192 resting time at the Refuge. It is my understanding that eagles usually follow the same migration  
193 path and winter in the same areas year after year. Therefore eagles will continue to be  
194 abundant in this area, and in fact will probably be increasing in numbers due to new eagles  
195 being born and the relatively long life of eagles (typically 20-30 years in the wild). The before  
196 mentioned WEST document states that no bald eagle nests are located within three miles of  
197 the Project boundary. However, I know of an active eagle nest that is less than 3 miles from the  
198 Project boundary.

199

200 **Q: Do you have any other concerns regarding the siting of towers for the Crocker Wind Farm?**

201 A: Yes. I do not think wind towers should be allowed on land that is in grassland or wetland  
202 easements. I own land that has been enrolled in these easements and I can only pasture or hay  
203 these areas after July 15. The easement contract states: "The purpose of the easement is to  
204 protect the habitat quality of the lands and such lands shall be maintained to provide cover,  
205 especially nesting cover, and food for a varied array of aquatic, terrestrial, and avian wildlife,  
206 particularly waterfowl and threatened and endangered species... in perpetuity." "It is further  
207 understood that the rights and the interests granted to the United States herein shall become  
208 part of the National Wildlife Refuge System, pursuant to the National Wildlife Refuge System  
209 Administration Act, 16 U.S.C. 668dd." Therefore it seems to me that allowing wind towers on  
210 this land is akin to allowing wind towers in National Wildlife Refuges. Would the USFWS also  
211 consider allowing wind towers in the Waubay, SD National Wildlife Refuge? If wind towers will  
212 be allowed on easement land through a land exchange (which I don't think should be  
213 appropriate), the USFWS should at least stand by the statements that they made in their  
214 November 29, 2016 letter to Crocker. This statement was: "We recommend offsetting  
215 measures for any turbines placed within grasslands to compensate for avoidance behavior by  
216 grassland nesting birds, which may avoid the structures by 300 m or more (approximately a 70  
217 acre circle around each turbine) (Shaffer and Buhl 2015)."

218

219 In summary, at the very least I would strongly recommend that the twelve (12) southernmost  
220 towers near Reid Lake be removed from the project. According to the latest map that I have  
221 seen, these would be towers 112, 113, 114, 115, 118, 119, 120, 67, 66, 63, 81, and 82.

222

223 **Q: Does this conclude your testimony:**

224 A: Yes.

The foregoing written testimony is to be presented to the South Dakota PUC for SD PUC Docket EL-17-055.

Dated this 27<sup>th</sup> day of March, 2018.

Gale Paulson

Gale Paulson