

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

**IN THE MATTER OF THE APPLICATION BY SWEETLAND WIND FARM, LLC  
FOR FACILITY PERMITS OF A WIND ENERGY FACILITY AND A 230-KV  
TRANSMISSION FACILITY IN HAND COUNTY, SOUTH DAKOTA FOR THE  
SWEETLAND WIND FARM PROJECT**

**SD PUC DOCKET EL19-\_\_\_\_**

**PRE-FILED DIRECT TESTIMONY OF CARRIE BARTON  
ON BEHALF OF SWEETLAND WIND FARM, LLC**

March 6, 2019

1 **I. INTRODUCTION AND QUALIFICATIONS**

2

3 **Q. Please state your name, employer, and business address.**

4 A. My name is Carrie Barton. I am employed by Burns & McDonnell, 9400 Ward  
5 Parkway, Kansas City, MO 64114.

6

7 **Q. Briefly describe your educational and professional background and duties.**

8 A. I am a senior environmental scientist and have a Bachelor of Arts in Earth  
9 Science from University of California at Berkeley and a Master of Science in  
10 Marine Geology and Geochemistry from Massachusetts Institute of Technology.  
11 I have more than 20 years of broad experience across a range of environmental  
12 issues, including National Environmental Policy Act (“NEPA”) studies, community  
13 impacts and environmental justice, geology and soils, cultural resources, air and  
14 noise, wetlands, threatened and endangered species, siting and routing,  
15 stormwater pollution prevention, and stakeholder management plans. My  
16 resume is attached as **Exhibit A3-1**.

17

18 **Q. What is your role with respect to the Sweetland Wind Farm and associated  
19 transmission line (together, the “Project”)?**

20 A. Burns & McDonnell was engaged by Sweetland Wind Farm, LLC (“Sweetland”)  
21 to provide environmental permitting support on the Project.

22

23 **Q. In the event you are not available to testify, is there another individual  
24 qualified to discuss the information in your testimony?**

25 A. Yes, Mr. Paul Callahan, a principal project manager for Burns and McDonnell, is  
26 qualified to discuss the information in my testimony. Detailed information  
27 regarding Mr. Callahan’s qualifications and experience is included in his resume,  
28 attached as **Exhibit A3-2**.

29

30 **II. PURPOSE OF TESTIMONY**

31

32 **Q. What is the purpose of your Direct Testimony?**

33 A. The purpose of my Direct Testimony is to provide information concerning existing  
34 environmental conditions in the area of the proposed Project (“Project Area”),  
35 potential impacts of the Project on the existing environment, and how the Project  
36 will avoid or minimize potential impacts. In addition, I generally describe the  
37 environmental survey work conducted on behalf of the Applicant to analyze the  
38 Project Area, local permitting, and federal and state agency correspondence and  
39 coordination. I will also provide information concerning the Western Area Power  
40 Administration’s (“WAPA”) NEPA review currently underway for the Project.

41

42 **Q. Please identify which sections of the Application you are sponsoring for**  
43 **the record.**

44 A. I am sponsoring the following sections of the Application:

- 45 • Section 2.2: Summary of Agency Coordination
- 46 • Section 2.5: Environmental Analysis
- 47 • Section 3.0: Facility Permit Application
- 48 • Section 10.0: Environmental Information
- 49 • Section 11.0: Effect on Physical Environment
- 50 • Section 12.0: Effect on Hydrology
- 51 • Section 13.3: Wetlands and Waterbodies
- 52 • Section 14.0: Effect on Aquatic Ecosystems
- 53 • Section 15.1: Land Use
- 54 • Section 15.2: Public Lands and Facilities
- 55 • Section 15.4: Visual Resources
- 56 • Section 17.0: Water Quality
- 57 • Section 18.0: Air Quality
- 58 • Section 27.1: Permits and Approvals
- 59 • Section 27.2.1: USFWS and SDGFP

- 60 • Section 27.2.2: WAPA and SHPO/THPO (excluding portion regarding
- 61 SHPO/THPO)
- 62 • Appendix B: Agency Coordination
- 63 • Appendix K: Wetland Delineation Report
- 64

65 **III. ENVIRONMENTAL SURVEYS/STUDIES**

66

67 **Q. What was the overall approach to environmental analysis of the Project**

68 **Area?**

69 A. Studies of the Project Area were designed in coordination with applicable

70 agencies and conducted to identify and assess potential impacts to existing

71 resources and features, including but not limited to threatened and endangered

72 species, wetlands and waterbodies, cultural resources, and sensitive land uses.

73 Sweetland used this information to inform siting of Project facilities in order to

74 avoid and/or minimize potential impacts. Further, Sweetland has identified

75 specific construction and operation avoidance and minimization measures that

76 will be implemented to further protect identified resources and features.

77

78 **Q. Discuss the environmental surveys and/or studies conducted with respect**

79 **to the Project.**

80 A. The environmental studies and field surveys conducted for the Project are

81 summarized in Table 2-2 of the Application and below:

<b>Study</b>	<b>Date</b>	<b>Status</b>
Baseline Avian Study, Year 1 Report	May 2017 to April 2018	Complete
Baseline Avian Study, Year 2 Studies	May 2018 to present	Ongoing
Bat Activity Study 2017 Report	June to October 2017	Complete
Bat Activity Study 2018 Report	May to October 2018	Complete
Bat Summer Presence/Absence Survey Report	November 14, 2018	Complete
Eagle and Raptor Nest Surveys 2017 (Year 1) Report	March and May 2017	Complete
Eagle and Raptor Nest Surveys 2018 (Year 2) Report	March and May 2018	Complete

<b>Study</b>	<b>Date</b>	<b>Status</b>
Whooping Crane Stopover Habitat Assessment Report	December 2018	Complete
Native Grassland Habitat Report	July to September 2018	Complete
Wetland Delineation Report	June and October 2018	Complete
Cultural Resources Survey	October 2018 to present	Ongoing
Historical/Architectural Survey	January to February 2019	Complete
AM and FM Radio Report	February 2019	Complete
Off-Air TV Analysis	February 2019	Complete
Microwave Study	May 2017	Complete
Obstruction Analysis & Airspace Analysis	January 2019	Complete
Sound Study	February 2019	Complete
Shadow Flicker Analysis	February 2019	Complete
Jobs and Economic Development Impact (JEDI) Model	February 2019	Complete

82

83 **Q. How has the Applicant incorporated the results of the surveys and studies**  
84 **conducted into Project design?**

85 A. Results of the studies identified in the previous table have influenced Project  
86 design and have been used to avoid or minimize impacts to potentially sensitive  
87 environmental areas. Final micro-siting of Project facilities will continue to occur  
88 between now and summer 2019, based on a Phase I Environmental Site  
89 Assessment; remaining wetland and waterbodies evaluations, cultural and tribal  
90 resource surveys, and a geotechnical analysis; and final engineering design. As  
91 discussed in more detail in the sections that follow, the remaining study work is  
92 not anticipated to affect the environmental analysis set forth in the Application, or  
93 anticipated to prevent the Project from meeting all applicable local, state, and  
94 federal permitting requirements.

95

96 **IV. ENVIRONMENTAL SITE ANALYSIS OVERVIEW**

97

98 **Q. Please provide a general overview of the Project Area from a land use**  
99 **perspective.**

100 A. The following land use classifications occur within the Project Area: land used  
101 primarily for row and non-row crops in rotation; pasturelands and rangelands;  
102 haylands; grasslands (Above Average, Average, and Fair conditions); and, other  
103 (i.e., developed, open water, wetlands, wooded, shrub/scrub). No undisturbed  
104 native grasslands—defined as grasslands that showed no evidence of previous  
105 tilling and were dominated entirely by native tallgrass species—were  
106 documented in the Project Area. See also Direct Testimony of Todd Mabee.  
107 Occupied farm sites and rural residences are scattered throughout the Project  
108 Area. There are 19 occupied residences within the Project Area.

109

110 **Q. What steps will the Applicant take to avoid or minimize impacts to existing**  
111 **land uses?**

112 A. As discussed in more detail in Section 15.1 of the Application, Project  
113 construction will result in conversion of only a small portion of the land within the  
114 Project Area from existing land to host Project facilities. Following completion of  
115 construction, the construction contractor would coordinate with the Natural  
116 Resources Conservation Service and/or the landowner on seed mixes for  
117 revegetation. The seed mixes and revegetation plan would be developed as part  
118 of the Stormwater Pollution Prevention Plan for the Project.

119

120 **Q. Describe the wetlands present within the Project Area.**

121 A. Wetland field delineations were completed in June and October 2018. As a  
122 result of the wetland delineations, 78 wetlands and 28 streams were identified  
123 within the area surveyed, for a total of approximately 40 acres of wetlands and  
124 12,879 feet of streams. Section 13.3 and Appendix K provides additional detail  
125 on wetlands within the Project Area.

126

127 **Q. What measures will the Applicant employ to avoid or minimize potential**  
128 **impacts to wetland resources?**

129 A. Project components, such as wind turbines, gen-tie line structures, and access  
130 roads, are generally located in upland areas, avoiding low-lying wetlands and  
131 streams. Total permanent impacts to both wetlands and streams are anticipated  
132 to be less than 0.10 acre. Thus, impacts to wetlands and streams would be  
133 minor, and are anticipated to be authorized under U.S. Army Corps of Engineers  
134 (“USACE”) Nationwide Permit (“NWP”) 12. The Project would be required to  
135 adhere to all conditions of NWP 12, including but not limited to restoring all areas  
136 with temporary impacts to pre-construction conditions. Any revisions to the  
137 Project layout would similarly be required to comply with USACE NWP 12 or  
138 other applicable federal Clean Water Act Section 404 requirements.

139

140 **Q. Are aquatic ecosystems present in the Project Area and, if so, what**  
141 **measures will the Applicant employ to avoid or minimize potential**  
142 **impacts?**

143 A. As discussed in Section 14 of the Application, surface waters are present within  
144 the Project Area; however, the Applicant will employ various Best Management  
145 Practices (“BMPs”) to avoid or minimize any impacts to aquatic habitat, and if  
146 determined to be present, will avoid impact to any state or federally protected  
147 aquatic species.

148

149 **Q. Is the Project anticipated to impact existing water or air quality?**

150 A. No. As discussed in Sections 17 and 18 of the Application, the Project is not  
151 anticipated to have significant impacts to water or air quality.

152

153 **V. NEPA PROCESS**

154

155 **Q. Why is the Project subject to review under NEPA?**

156 A. The Project would interconnect with WAPA’s existing Fort Thompson to Huron  
157 230-kV transmission line. Because execution of an interconnection agreement

158 allowing the Project to interconnect to WAPA's system constitutes a Federal  
159 action, WAPA is preparing an Environmental Assessment ("EA") for the Project  
160 interconnection in accordance with the applicable requirements and standards of  
161 NEPA.

162

163 **Q. Please describe the NEPA environmental review process for the Project,**  
164 **including its current status.**

165 A. The EA is currently being prepared, and Sweetland Wind anticipates that WAPA  
166 will approve a final EA and issue a Finding of No Significant Impact in the  
167 summer of 2019. While WAPA must analyze impacts of the entire Project,  
168 WAPA's Federal action is limited to the approval of the interconnection.

169

## 170 **VI. AGENCY COORDINATION**

171

172 **Q. Please discuss the Applicant's agency coordination efforts.**

173 A. As discussed in Sections 2.2 and 27.2 of the Application, as part of Project  
174 development and the NEPA process, the Applicant has coordinated with various  
175 federal, state, and local agencies regarding the Project. Numerous meetings and  
176 discussions have been held with USFWS and South Dakota Game, Fish and  
177 Parks ("SDGFP") regarding avoidance and minimization of potential impacts to  
178 wildlife and associated habitat. See also Direct Testimony of Todd Mabee.  
179 Agency coordination will continue throughout the NEPA review and, as needed,  
180 during Project development, construction, and operation.

181

## 182 **VII. PERMITS AND APPROVALS**

183

184 **Q. In addition to Energy Facility Permits, what other permits are required for**  
185 **the Project?**

186 A. Various federal, state, and local approvals may be required for the Project. Table  
187 27-1 in the Application identifies potential permits or approvals that may be



188 required for the construction and operation of the Project, and also identifies the  
189 status of each permit/approval.

190

191 **VIII. CONCLUSION**

192

193 **Q. Does this conclude your direct testimony?**

194 **A. Yes.**

195

196 Dated this 6th day of March, 2019.

197

198

*Carrie Barton*

199

200

201 \_\_\_\_\_  
Carrie Barton

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