

**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 EL 19-012**

**PRE-FILED REBUTTAL TESTIMONY OF MARK WENGIERSKI  
ON BEHALF OF SWEETLAND WIND FARM, LLC**

July 10, 2019

1 **I. INTRODUCTION AND QUALIFICATIONS**

2

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

4 A. My name is Mark Wengierski.

5

6 **Q. On March 6, 2019, did you provide Direct Testimony on behalf of the**  
7 **Sweetland Wind Farm (“Project”)?**

8 A. Yes.

9

10 **Q. On May 20, 2019, did you provide Supplemental Direct Testimony on behalf of**  
11 **the Project?**

12 A. Yes.

13

14 **II. PURPOSE OF TESTIMONY**

15

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

17 A. The purpose of my testimony is to address the following topics:

- 18 • Discuss the settlement agreement between Sweetland Wind Farm, LLC  
19 (“Sweetland”) and Intervenor Theresa Lichty;
- 20 • Provide an update regarding the status of securing an agreement for the out-  
21 lot owned by Mr. and Mrs. Letsche (see revised Figure A-2, which was filed in  
22 this docket on April 24, 2019);
- 23 • Discuss updates to the Project layout as a result of additional site analysis;  
24 and
- 25 • Address the pre-filed direct testimony of South Dakota Public Utilities  
26 Commission (“Commission”) Staff Analyst, Jon Thurber.

27

28 **III. LICHTY SETTLEMENT AGREEMENT**

29

30 **Q. Could you discuss the Settlement Agreement reached with Ms. Lichty?**

31 A. Yes. As outlined in the Settlement Stipulation between Sweetland and Ms. Lichty,  
32 Sweetland has agreed not to construct a turbine at the location identified as Turbine  
33 55 on Revised Figure A-2 (filed in the docket on April 24, 2019), or within one-half  
34 mile of Ms. Lichty's property consisting of the Southeast Quarter of Section 16,  
35 Township 111 North, Range 066 West, Hand County, South Dakota. Additionally,  
36 Ms. Lichty agreed that she no longer has an objection to the location identified as  
37 Turbine 48 on Revised Figure A-2, and that she would withdraw from the  
38 proceeding. The Commission approved the settlement at its meeting on July 9,  
39 2019.

40

#### 41 **IV. LETSCHE AGREEMENT**

42

43 **Q. In your Supplemental Direct Testimony, you indicated that Mr. and Mrs.**  
44 **Letsche own an unleased out-lot and Sweetland had provided them with a**  
45 **proposed Good Neighbor Agreement. Could you provide an update regarding**  
46 **the status of securing that agreement?**

47 A. Yes. Mr. and Mrs. Letsche have executed a Good Neighbor Agreement with  
48 Sweetland covering their out-lot.

49

#### 50 **V. LAYOUT MODIFICATIONS**

51

52 **Q. Could you discuss revisions made to the Project layout as a result of further**  
53 **site analysis?**

54 A. Yes. Since my supplemental direct testimony was submitted, Sweetland has  
55 conducted additional cultural and tribal resource surveys for the Project. A copy of  
56 the Level III Intensive Cultural Resources Survey Addendum Report for the  
57 additional cultural resource survey work is provided as **Exhibit A13-1** (filed  
58 confidentially). Based on the results of the additional survey work, Sweetland has  
59 removed from consideration the following turbines: T46, T68, T74, and T66A. As  
60 noted above, Sweetland also agreed to remove T55 at Ms. Lichty's request. As a  
61 result of these modifications, four alternate turbines are now primary turbine

62 locations to replace the four primary turbine locations removed. Specifically,  
63 turbines 1A, 12A, 82A, and 88A are now primary turbines. A chart showing turbine  
64 location status changes between the initial layout provided in the Application and the  
65 current layout is provided as Exhibit A13-2.

66

67 **Q. Is an updated version of Figure A-2 showing the current Project layout, with**  
68 **the modifications you just described, provided as Exhibit A13-3?**

69 A. Yes.

70

## 71 **VI. RESPONSE TO THURBER TESTIMONY**

72

73 **Q. In his testimony, Mr. Thurber notes that Staff had requested that Sweetland**  
74 **propose an amount for the indemnity bond required pursuant to SDCL 49-41B-**  
75 **38 (Thurber Testimony at 7:32 – 8:2). Has Sweetland provided a proposal to**  
76 **Staff?**

77 A. Yes. In the Dakota Range III docket (EL 18-046), a \$1,000,000 bond was agreed to  
78 for an approximately eight-mile-long generation tie-line line. Since the Project's  
79 preferred Gen-Tie Line route is almost half as long (4.86 miles), Sweetland proposes  
80 a bond amount of \$500,000. Note that in response to a data request from Staff,  
81 Sweetland inadvertently stated that the preferred Gen-Tie Line route is  
82 approximately 3.86 miles long, rather than 4.86 miles long.

83

84 **Q. In his testimony, Mr. Thurber notes that Staff had asked Sweetland whether it**  
85 **would install an Aircraft Detection Lighting System (“ADLS”) on the Project**  
86 **(Thurber Testimony at 10:20-22). Did Sweetland provide a response?**

87 A. Yes. In response to a data request from Staff, Sweetland informed Staff that it will  
88 install an ADLS system on the Project.

89

90 **Q. In his testimony, Mr. Thurber notes that Staff would like to have additional**  
91 **information regarding the technology that will be used to monitor icing on**

92 **wind turbine blades (Thurber Testimony at 11:6-13). Has Sweetland provided**  
93 **this requested information?**

94 A. Yes. In response to a data request from Staff, Sweetland provided information  
95 regarding the Winter Ice Operation Mode (“WIOM”), which is a standard feature of  
96 General Electric 2.X turbine models and assists with detection and monitoring of  
97 icing on wind turbine blades. Additionally, Sweetland confirmed with General  
98 Electric that the 1.1x turbine tip height setback set forth in General Electric’s Setback  
99 Considerations for Wind Turbine Siting (see Appendix D to the Application) is  
100 recommended for the turbine models under consideration, which will include WIOM,  
101 and provided a copy of the correspondence with General Electric with its data  
102 request response. Finally, Sweetland proposes the following ice detection condition,  
103 which Sweetland has confirmed with General Electric aligns with how the technology  
104 on the proposed turbine models will operate:

105  
106 The Project will use the following method to detect icing  
107 conditions on turbine blades: (1) Applicant will install sensors  
108 on the nacelle and instrumentation that will measure air  
109 temperature, wind speed, and power output. That  
110 information, in addition to monitoring for deviations in each  
111 turbine's power curve, will then be used by an algorithm in  
112 the software system to assess whether there is ice buildup  
113 on the blades. (2) Applicant will also utilize meteorological  
114 data from on-site permanent meteorological towers, on-site  
115 anemometers, and other relevant meteorological sources to  
116 determine if ice accumulation is occurring. These control  
117 systems would either automatically shut down the turbine(s)  
118 in icing conditions, or Applicant would manually shut down  
119 turbine(s) if icing conditions are identified. Turbines would  
120 not return to normal operation until the control systems  
121 indicate icing is no longer a concern. Applicant will pay for

122 any documented damage caused by ice thrown from a  
123 turbine blade.

124

125 **Q. In his testimony, Mr. Thurber notes that Staff makes certain recommendations**  
126 **regarding decommissioning commitments for the Project (Thurber Testimony**  
127 **at 14:6-27). Do you have a response?**

128 A. Yes. Regarding the depth facility removal, Sweetland agrees to remove from the  
129 Project site all towers, turbine generators, transformers, foundations, and buildings  
130 to a depth of four feet. Regarding the decommissioning cost estimate and financial  
131 instrument, Sweetland agrees to a condition that provides for an escrow agreement  
132 and funding of an escrow account in the amount of \$5,000 per turbine per year for  
133 30 years.

134

135 **Q. In his testimony, Mr. Thurber notes Staff’s recommendations regarding a**  
136 **maximum sound level at two non-participating residences: receptor 8 and**  
137 **receptor 11 (Thurber Testimony at 17:1 – 18:33). Do you have a response?**

138 A. Yes. As indicated in response to a data request from Staff, Lyle and Rebecca  
139 Resel, who own the residence identified as receptor 8, have executed a Good  
140 Neighbor Agreement with Sweetland for the Project and are now participating  
141 landowners.

142

143 As such, only one non-participating landowner residence – receptor 11, owned by  
144 Steven Runge – is located within one mile of the Project. Sweetland is also in the  
145 process of trying to secure a Good Neighbor Agreement with Mr. Runge. However,  
146 even if Mr. Runge were to remain a non-participating landowner, the modeled sound  
147 level at Mr. Runge’s residence complies with Staff’s recommended “ideal” sound  
148 level of 40 A-weighted decibels (“dBA”). As Mr. Thurber notes in his testimony, the  
149 40 dBA “ideal” sound level Staff recommends is based on Mr. Hessler’s testimony in  
150 prior Commission dockets, and Mr. Hessler does not include the manufacturer’s  
151 uncertainty factor. Based on Epsilon’s sound modeling, the maximum sound level at  
152 Mr. Runge’s residence would be 42 dBA with a 2 dBA uncertainty factor. Thus,

153 without the 2 dBA uncertainty factor, the modeled sound level at Mr. Runge's  
154 residence would be 40 dBA. For further discussion, please see the Rebuttal  
155 Testimony of Robert O'Neal.

156

157 **Q. What is Sweetland's position with respect to a sound limit for the Project?**

158 A. Although Commission Staff recommends a sound limit of 40 dBA at non-participating  
159 residences, Sweetland proposes a sound limit that is consistent with the terms of  
160 Sweetland's Development Agreement with Hand County: 50 dBA at currently  
161 occupied residences of participating landowners and 45 dBA at currently occupied  
162 residences of non-participating landowners, unless waived in writing by the owner of  
163 the occupied residence. As Mr. Thurber notes, the sound limit in the Development  
164 Agreement is consistent with the standard ordered by the Commission for the  
165 Crocker Wind Farm (Docket EL 17-055), Dakota Range I and II Wind Project  
166 (Docket EL 18-003), Dakota Range III Wind Project (Docket EL 18-046), and Deuel  
167 Harvest North Wind Farm (Docket EL 18-053). Further, there have been no  
168 complaints or concerns noted regarding sound from the Project, unlike in Prevailing  
169 Wind Park (Docket EL 18-026). Thus, Sweetland's recommended sound levels are  
170 reasonable and consistent with past precedent.

171

172 That said, through diligent siting and securing participation agreements, expected  
173 sound levels from the Project are at or below 40 dBA at all non-participating  
174 residences when applying Mr. Hessler's modeling methodology. See Rebuttal  
175 Testimony of Robert O'Neal. Thus, Sweetland has taken steps to address Staff's  
176 underlying sound level concern.<sup>1</sup>

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<sup>1</sup> Notably, in the Crocker Wind Farm docket (EL 17-055), a sound level limit of 45 dBA at non-participating residences was agreed to by Staff and the Applicant, and included as a condition to the permit issued by the Commission, even though sound levels at non-participating residences were at or below 40 dBA.

178 **Q. In his testimony, Mr. Thurber notes that it is unclear what the participation**  
179 **status is of receptors 6, 7 and 20, as identified in the Updated Sound and**  
180 **Shadow Flicker Analyses, Exhibit A10-1 (Thurber Testimony at 15:29 – 16:4).**  
181 **Could you please clarify the current participation status of those receptors?**

182 A. Yes. As discussed in supplemental direct testimony, during title review, Sweetland  
183 identified out-lots that were not covered by existing agreements. Receptors 6 and  
184 20 are located on two of the out-lots. Mr. and Mrs. Stevens (owners of receptor 20)  
185 executed an amendment to add the out-lot they own to their existing Wind Energy  
186 Lease and Easement Agreement for the Project, and Mr. Fanning (owner of receptor  
187 6) executed a good neighbor agreement with the Project for his out-lot. Additionally,  
188 Mr. Resel (owner of receptor 7) executed a good neighbor agreement for the land on  
189 which his residence is located, and has also executed a Wind Energy Lease and  
190 Easement Agreement for other land he owns within the Project Area. Thus, all three  
191 receptors are owned by participating landowners. See *also* Exhibit A14-1 to the  
192 Rebuttal Testimony of Robert O’Neal.

193

194 **Q. Is it Sweetland’s intent to work with Staff to try to negotiate a settlement to**  
195 **present to the Commission?**

196 A. Yes. Sweetland is providing proposed settlement conditions to Staff and hopes to  
197 negotiate a settlement with Staff in the near future.

198

199 **VII. CONCLUSION**

200

201 **Q. Does this conclude your Supplemental Direct Testimony?**

202 A. Yes.

203

204 Dated this 10th day of July, 2019.

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208 Mark Wengierski

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