

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF THE)
APPLICATION BY CROCKER WIND) EL 17-028
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)

DIRECT TESTIMONY OF

MELISSA SCHMIT

ON BEHALF OF

CROCKER WIND FARM, LLC

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1 **Q. Please state your name and business address for the record.**

2 A. My name is Melissa Schmit. I am a Senior Permitting Specialist for Geronimo Energy,
3 LLC headquartered at 7650 Edinborough Way, Suite 725 Edina, MN 55435.

4 **Q. Can you briefly describe your education and experience?**

5 A. I hold a Bachelor of Arts in Environmental Studies and Geography from Gustavus
6 Adolphus College and a Juris Doctor from Hamline University School of Law. I have
7 approximately ten years of experience permitting various infrastructure on the local, state, and
8 federal level.

9 **Q. Have you attached a resume or CV.**

10 A. Yes.

11 **Q. Have you previously submitted or prepared testimony in this proceeding in South
12 Dakota?**

13 A. No.

14 **Q. What is the purpose of your direct testimony?**

15 A. I am testifying on various sections of the Crocker Wind Farm Facility Permit Application
16 before the South Dakota Public Utilities Commission.

17 **Q. Which sections of the application are you responsible for?**

18 A. I participated in the preparation of the following sections:

- 19 • Section 1.0 - Introduction
20 • Section 2.0 – Facility Permit Application
21 • Section 3.0 – Completeness Check
22 • Section 4.0 – Names of Participants

- 23 • Section 5.0 – Name of Owner and Manager
- 24 • Section 6.3.1 – Additional Considerations; Socially Beneficial Uses of Energy Output
- 25 • Section 8.4 – Wind Turbine Foundations
- 26 • Section 8.6 – Access Roads
- 27 • Section 8.7 – O&M Facility
- 28 • Section 8.9 – Temporary Laydown/Stockpile Areas/Batch Plant/Crane Walks
- 29 • Section 8.10 – Transmission Interconnection Facilities
- 30 • Section 9.0 – Alternative Sites and Siting Criteria
- 31 • Section 15.5.6 – Electromagnetic Interference (Interstate Telecommunications Coop.
- 32 coordination)
- 33 • Section 16.0 – Local Land Use Controls
- 34 • Section 22.0 – Future Additions and Modifications
- 35 • Section 24.2 - Safety
- 36 • Section 28.0 – Additional Information in Application

37 **Q. Please provide an overview of the proposed project.**

38 A. The Crocker Wind Farm is located on approximately 29,331 acres of privately owned land in
 39 Clark County, South Dakota. The proposed project includes up to 200 wind turbines, associated
 40 access roads, electrical collection and communication lines, collector substation/interconnection
 41 facilities, an operations and maintenance facility, up to four permanent meteorological towers,
 42 and an associated 345 kilovolt transmission line approximately 6.5 miles in length that is located
 43 wholly within the project boundary. The transmission line will run from a substation in Section
 44 30 of Township 199N, Range 58W to the Point-of-Interconnect, which is located approximately
 45 two miles north of the town of Crocker in Section 9 of Township 119N, Range 58W. At the

46 Point-of-Interconnect, the power will transfer to the Basin Electric Groton-to-Watertown 345
47 kilovolt transmission line, part of the Southwest Power Pool, Inc./Western Area Power
48 Administration transmission line portfolio in Clark County, South Dakota.

49 **Q. Describe the information presented in Section 2.0 related to the proposed use of U.S.**
50 **Fish and Wildlife Service grassland easements.**

51 A. Crocker proposes to construct and operate some of the project facilities on U.S. Fish and
52 Wildlife Service (USFWS) grassland easement land. This process includes the preparation of an
53 Environmental Assessment in accordance with the applicable requirements and standards of the
54 National Environmental Policy Act (NEPA). Crocker is utilizing the Upper Great Plains Wind
55 Energy Final Programmatic Environmental Impact Statement (PEIS) to navigate the use of
56 USFWS easement land. The PEIS was jointly prepared by Western Area Power Administration
57 and the USFWS to identify environmental impacts associated with various environmental review
58 processes that could be implemented to evaluate requests for land exchanges to accommodate
59 wind energy facilities that may affect wetland and grassland easements managed by the USFWS
60 in the Upper Great Plains Region. The processes and management practices identified in the
61 PEIS are intended to expedite site specific NEPA evaluations by providing a framework
62 document from which other NEPA documents could tier. A draft Environmental Assessment for
63 the Project is currently under review with the USFWS.

64 **Q. Does the Project Application meet the criteria set forth in South Dakota Codified**
65 **Law and the Administrative Rules of South Dakota?**

66 A. Yes. Pursuant to SDCL 49-41B-22, the Application establishes that the proposed project
67 complies with applicable law and rules; the proposed project will not pose a threat of serious
68 injury to the environment or to the social and economic condition of inhabitants in, or near the

69 Project Area; the proposed project will not substantially impair the health, safety, or welfare of
70 the inhabitants; and the proposed project will not unduly interfere with the orderly development
71 of the region, having given consideration to the views of the governing bodies of the local
72 affected units of government. Section 3.0 of the Application provides an overview of the
73 statutory criteria and where in the Application each rule requirement is addressed.

74 **Q. Describe the information presented in Section 4.0 – Names of Participants**

75 A. Crocker is a wholly owned subsidiary of Geronimo Energy, LLC. Geronimo Energy, LLC is
76 a privately held Delaware limited liability company headquartered in Edina, Minnesota.
77 Individuals who are authorized to receive communications relating to the application are Brett
78 Koenecke and Kara Semmler of May, Adam, Gerdes and Thompson, LLP and Patrick Smith and
79 myself from Geronimo Energy, LLC.

80 **Q. Describe the information presented in Section 5.0 – Name of Owner and Manager**

81 A. The Applicant will be the sole owner of the proposed Project. Myself and Patrick Smith are
82 the primary contacts.

83 **Q. Describe the information presented in Section 6.3.1 – Additional Considerations;**
84 **Socially Beneficial Uses of Energy Output**

85 A. Section 6.3.1 outlines the socially Beneficial Uses of Energy Output and the varied societal
86 benefits the Project will provide. Examples include providing a large amount of clean,
87 renewable energy, energy reliability through the diversified generation resources such as wind,
88 and a supplementary source of income for rural landowners and farmers on whose land the
89 Project will be sited.

90 **Q. Describe the information presented in Section 8.4 – Wind Turbine Foundations**

91 A. Section 8.4 of the Application provides information on wind turbine foundations. The turbine

92 towers will be connected by anchor bolts to a concrete foundation. Turbine foundations will use
93 a pad-and-pier tower mounting system consisting of top and bottom templates. The templates
94 consist of anchor bolts and reinforcing steel bar. They are placed within the excavated portion of
95 the turbine footing and filled with concrete. The anchor bolts protrude from the concrete pad
96 surface and the turbine base is fastened to the bolts. The excavated portion of the concrete
97 turbine pad ranges from approximately 291 to 737 cubic yards depending on soil requirements
98 and turbine size. Turbine pads will be between four to six feet deep and will be approximately
99 two to three feet above grade. Geotechnical surveys, turbine tower load specifications, and cost
100 considerations will dictate final design parameters of the foundations. Turbine assembly will
101 require a gravel crane pad from the access road to the turbine foundation and a laydown area for
102 rotor assembly near the turbine foundation.

103 **Q. Describe the information presented in Section 8.6 – Access Roads**

104 A. All-weather gravel roads will be installed that provide access to wind turbines for
105 maintenance. They will be approximately 34 feet wide to accommodate transportation of
106 construction equipment and will be reduced to 16-18 feet when construction is complete. Total
107 access road length will be approximately 61 miles with final lengths determined by civil
108 engineering and the final turbine layout. Access roads were designed to serve the Project most
109 efficiently while taking landowner input.

110 **Q. Describe the information presented in Section 8.7 – O&M Facility.**

111 A. An operations and maintenance building will be constructed in or near the Project Area and
112 will provide access and storage for Project maintenance and operations. The O&M may be co-
113 located with the Project substation, however the location has not been finalized. Construction of
114 the O&M facility will require a building permit from the county and/or township where it will be

115 located. Buildings typically used for this purpose are approximately 3,000 to 5,000 square feet
116 and house the equipment to operate and maintain the Project. There will be a parking lot adjacent
117 to the building that will be approximately 3,000 square feet.

118 **Q. Describe the information presented in Section 8.9 – Temporary Laydown/Stockpile**
119 **Areas/Batch Plan/Crane Walks**

120 A. Approximately ten acres will be graded for a temporary laydown area. It will be centrally-
121 located within the Project Area and will serve as both a parking area for construction personnel
122 and staging area for turbine components during construction. A separate staging area of
123 approximately 10 acres will serve as a parking and unloading area for large equipment deliveries.

124 **Q. Describe the information presented in Section 8.10.1 – Transmission**
125 **Interconnection Facilities; Collector Lines and Feeder Lines**

126 A. Section 8.10.1 describes the collector and feeder lines of the Project. The collection system
127 will consist of a network of underground electrical cabling operating at 34.5 kV. From the step-
128 up transformers located at the base or within the tower section of each turbine, power will run
129 through an underground an/or aboveground collection system to the Project substation, which
130 will raise the voltage to 345 kV. Up to 156 miles of underground lines will be installed by
131 trenching, plowing, or where needed, directionally boring the cables underground. Generally, the
132 electrical collection lines will be buried in trenches.

133 **Q. Why would collection need to be placed aboveground?**

134 A. Collector system cabling may go aboveground when conflicts with existing underground
135 utilities, other infrastructure, or sensitive environmental conditions cannot be resolved and
136 aboveground cabling will resolve the conflict. Where lines meet public road right-of-way, the
137 collection lines will either rise to become aboveground lines (if requested by the road authority

138 or if shallow bedrock, sensitive environmental conditions, or conflicts with underground utility
139 or other infrastructure are encountered) or will continue as underground lines. An occasional
140 aboveground junction box will be required when the lines from separate spools need to be
141 spliced together.

142 **Q. Describe the information presented in Section 8.10.2 – Transmission**

143 **Interconnection Facilities; Collector System and Fiber Optic Communication System**

144 A. Construction of the Project will include up to 200 turbines, each potentially with a pad-
145 mounted transformer at its base and with underground and/or aboveground electrical collection
146 and fiber optic communication systems. These wires will connect the wind turbines to the
147 substation and provide communications between the turbines, substation, O&M facility and
148 electrical grid. If underground, the wires will be placed in the same trench wherever possible
149 and will include a marking system and occasional aboveground junction boxes. All of the
150 collection circuits will connect to the Project substation which will have fiber optic connection to
151 the O&M building and a communication system to the grid operator. The power delivered to the
152 substation will be converted to 345 kV and enter the grid via the proposed 345 kV transmission
153 line connection the Project substation to the switch yard built by the interconnecting utility. All
154 grid to the Project communications will be specified by the interconnecting utility(ies) under a
155 Generator Interconnection Agreement.

156 **Q. Describe the information presented in Section 8.10.3 – Transmission**

157 **Interconnection Facilities; Substation**

158 A. As previously mentioned, the substation will step up the Project power to 345 kV. It will
159 include a control house, power transformers, switches, metering and other equipment needed for
160 safe electrical operations of the Project and interconnection to the electrical grid. The area

161 around the substation will be graveled and fenced and will be approximately 500 feet by 500 feet
162 once construction is complete.

163 **Q. Describe the information presented in Section 9.1 and how the project site was**
164 **selected.**

165 A. The project site was selected following an evaluation of the following criteria: wind resource
166 quality, landowner and community interest, transmission suitability, and environmental
167 considerations. These criteria were evaluated as a whole to determine if a project was physically
168 and economically possible.

169 **Q. Were there any alternative sites considered for the project?**

170 A. An initial evaluation of wind resource and the transmission system was conducted to
171 determine where to cost effectively connect new generation in South Dakota. The Clark County
172 area was identified and a review of the surrounding land use and regional constraints followed to
173 identify other development, interested landowners, and a landscape level environmental analysis
174 to identify fatal flaws (conditions that make construction and operation illegal or economically
175 impracticable).

176 **Q. Describe in more detail the environmental analysis that was conducted and how it**
177 **was used to identify alternative sites.**

178 The Application includes an analysis done consistent with the USFWS Land Based Wind Energy
179 Guidelines (WEGs) which guides an evaluation of the landscape. This landscape level analysis
180 creates an alternative in the sense that the site could be located anywhere within the area. Once
181 an area is identified, willing landowner's participation further narrows the site. The concept of
182 discrete alternate sites does not suit the siting of wind farms (and their associate generation tie
183 transmission lines) as well since they are typically linked to a specific interconnection point. The

184 regional analysis as substitute for discrete site alternatives was developed in the WEGs was done
185 through extensive consultation and coordination between industry and the USFWS as well as
186 state and regional partners.

187 **Q. Describe the information presented in Section 9.3 and how the necessary easements**
188 **were acquired for the project.**

189 A. Crocker is not a public utility and does not possess or rely on eminent domain powers to
190 acquire easements for the Project. All of the facilities for the wind farm and associated
191 transmission line will be located on properties that have been obtained through voluntary
192 agreements with landowners or within the public right-of-way.

193 **Q. Describe the status of the Project's Conditional Use Permit with Clark County.**

194 A. Crocker obtained a Conditional Use Permit (CUP) from Clark County in April of 2017. The
195 CUP contained nine conditions, including a $\frac{3}{4}$ mile setback from non-participating residences
196 and a one-mile setback from cemeteries. The Clark County Zoning Ordinance requires a 1,000 ft
197 setback from non-participating residences and does not contain a setback requirement for
198 cemeteries. The Clark County Board of Adjustment failed to provide findings to support these
199 setbacks and Crocker has sought relief in Circuit Court.

200 **Q. Explain why the application depicts a 2,000 ft setback from non-participating**
201 **residences and not $\frac{3}{4}$ of a mile.**

202 A. In an attempt to accommodate concerns from non-participants in the community, Crocker
203 offered to double the Clark County setback from 1,000 ft to 2,000 ft prior to approval of the
204 CUP. If relief sought is granted in Circuit Court, Crocker has committed to the 2,000 ft setback.
205 Therefore, if Crocker should be required to adhere to the $\frac{3}{4}$ mile setback, impacts represented the
206 Application would decrease because turbines within the $\frac{3}{4}$ mile setback would not be

207 constructed. Crocker elected to present the maximum project impacts and any outcome from the
208 Conditional Use Permit appeal process will not materially impact the analysis presented in the
209 Application.

210 **Q. Have you been involved in coordinating with the Interstate Telecommunications**
211 **Coop. (ITC)?**

212 A. Yes. I initiated coordinating with the ITC by sending a project notification letter dated April
213 18, 2016 and have been in communication with staff since September of 2016 when their review
214 of the project commenced.

215 **Q. What is the status of reaching an agreement with the ITC?**

216 A. A condition of the Project's CUP with Clark County requires an agreement is in place to
217 mitigate any potential interference to the ITC's facilities prior to construction. The Resolution
218 provided by the ITC at the Crocker Conditional Use Permit Hearing on March 7, 2017 contains
219 provisions that require further negotiation and clarification. We will continue to work with the
220 ITC and intend to have an agreement in place prior to the start of construction.

221 **Q. Expand on the negotiation and clarification required.**

222 A. The draft agreement lacks details required for financing such as verified testing procedures
223 and the agreement does not quantify potential impacts based on the Project's layout. As the
224 Project moves through permitting, design changes may result and Crocker has requested an
225 agreement with the ITC is executed once detailed design work is completed in mid-2018.

226 **Q. Describe the information presented in Section 24.2 - Safety**

227 A. Crocker and its construction team will coordinate with first responders, including but not
228 limited to air ambulance, local sheriff's office(s) and local fire services to develop a safety plan
229 during construction and operation of the Project. Crocker will also be in contact with local first

230 responders to offer information about the Project and to answer any questions response teams
231 may have regarding Project plans and details.

232 **Q. What security measures will be taken to ensure the Project is constructed and**
233 **operated safely?**

234 A. To reduce the chance of physical and property damage, as well as personal injury at the
235 Project the following will be security measures will be taken:

- 236 • Towers will be setback from homes as described in the Application. The distances are
237 considered to be safe based on developers experience, and are consistent with prior
238 Facility Permits.
- 239 • Temporary (safety) and permanent fencing, warning signs, and locks of equipment and
240 wind facility.
- 241 • Regular maintenance and inspections
- 242 • Turbines will sit on steel enclosed tubular towers within which all electrical equipment
243 will be located, except for the pad-mounted transformer where applicable.
- 244 • Access to interior of the tower only through a solid steel door that will be locked when
245 not in use.
- 246 • Permanent free-standing meteorological towers. The guy wires on temporary
247 meteorological towers have color sleeves at ground level to increase visibility.
- 248 • Gates/fences will be constructed when necessary or requested by landowners.
- 249 • Safety training and standardized practices will be conducted for construction crews and
250 on-site personnel.

251 **Q. Describe any plans for future modifications or expansion of the project or**
252 **construction of additional facilities that the project may wish to be approved in the permit.**

253 A. As detailed in Section 22.0, Crocker seeks approval from the SDPUC for up to 400 MW
254 and 200 turbine locations as shown on the preliminary Vestas V110 layouts in the Application,
255 with the understanding that a different turbine model may be used, some of the turbine locations
256 shown may ultimately be relocated or not be constructed as part of the Project or, alternately, that
257 additional turbine locations may be required. Crocker will provide the PUC with a final layout
258 prior to construction to ensure compliance with all applicable permits.

259 **Q. Describe why some turbine locations would be relocated/not constructed and why**
260 **additional turbine locations may be required.**

261 A. In addition to the turbine model selected, final turbine locations will depend on the Circuit
262 Court's decision regarding setbacks from residences and cemeteries, the completion of all
263 environmental studies, geo-technical studies, and the completion of the NEPA (grassland
264 easement exchange) process with the USFWS. The Application complies with all applicable
265 state rules and statute and any modifications made to the layout will remain in compliance with
266 state law and final determinations in the local and federal permitting process.

267 **Q. Describe the permits in addition to the one sought in this application which will be**
268 **required for construction and operation.**


269 A. Crocker will be responsible for undertaking all required environmental review and will obtain
270 all permits and licenses that are required following issuance of the Facility Permit. The potential
271 permits or approvals that have been identified as being required for construction and operation
272 include: NEPA Review from the U.S. Fish and Wildlife Service (includes Section 7 Consultation
273 and Section 106 Review); wetland delineation approvals, jurisdictional determinations and
274 Section 404/Section 10 permits from the U.S. Army Corps of Engineers; Spill Prevention
275 Control and Countermeasure (SPCC) Plan from the Environmental Protection Agency in

276 coordination with the South Dakota Department of Health; Determination of No Hazard and
277 Notice of Actual Construction or Alteration with the Federal Aviation Administration; Exempt
278 Wholesale Generator Self Certification and Mark-Based Rate Authorization with the Federal
279 Energy Regulatory Commission; Floodplain Designation with the Federal Emergency
280 Management Agency; Section 401 Water Quality Certification, National Pollutant Discharge
281 Elimination System Permit, Temporary Water Use Permit for Construction Activities, Water
282 Rights Permit for Nonirrigation Use, Temporary Discharge Permit, and Air Quality Permit with
283 the South Dakota Department of Environment and Natural Resources; Utility Permits of Trunk
284 Highway right-of-way, Oversize/Overweight Permit for State Highways, and Tall Structure
285 Permit with the South Dakota Department of Transportation; Right-of-way permits, crossing
286 permits, driveway permits for access roads, oversize/overweight permits for county/township
287 roads, and building permits through Clark County and associated townships.

288 **Q. Does this conclude your written pre-filed direct testimony?**

289 A. Yes.

290 Dated this 27th day of September, 2017.

291 

292 _____

293 Melissa Schmit

294