

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)

EL 17-028

DIRECT TESTIMONY OF

JAY HESSE

ON BEHALF OF

CROCKER WIND FARM, LLC

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

2 My name is Jay Hesse and I am a Project Manager with Geronimo Energy headquartered at 7650
3 Edinborough Way, Suite 725, Edina, MN 55435.

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

5 I have a Bachelor of Science from St. Cloud State University, College of Business.

6 I have over 7 years of wind energy development experience. I am currently the project manager
7 for multiple wind and solar energy projects at various stages of development in North Dakota
8 and South Dakota for Geronimo Energy including the Crocker Wind Farm. I have been involved
9 in the successful development of multiple utility scale wind energy projects now in operation in
10 Minnesota and North Dakota. I led the successful development of the 200 MW Courtenay Wind
11 Farm in North Dakota, currently in operation. My work includes overall project development and
12 working with landowners and other community stakeholders through the process.

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

14 Yes.

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

17 No.

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

19 Provide clarification and confirmation of information related to the permit application and
20 overall development of the Crocker Wind Farm.

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

22 I provided input for the following sections of the application.

23 1. Section 7.0 - ESTIMATED COST OF THE WIND ENERGY FACILITY

- 24 2. Section 16 – LOCAL LAND USE CONTROLS
- 25 3. Section 19.1 -TIME SCHEDULE (ARSD 20:10:22:22)– Land Acquisition
- 26 4. Section 20.2.1 – COMMUNITY IMPACT (ARSD (20:10:22:23) - Socioeconomic
- 27 and Community Impacts – Wind Farm and Transmission Line Route
- 28 5. Section 21.0 EMPLOYMENT ESTIMATES (ARSD 20:10:22:24)

29 **Q. Please give us an overview of your involvement in the proposed project.**

30 I am currently the project manager of the Crocker Wind Farm and I began working on this

31 project in July of 2010. I began work on this project by working with the original landowners in

32 the project and have continued to work with landowners and other project stakeholders over the

33 years.

34 **Q. Did you oversee the land acquisition for the project.**

35 Yes.

36 **Q. Is land acquisition finished for the project being permitted?**

37 Yes.

38 **Q. Did the project reject any landowners or properties?**

39 We attempted to offer wind lease agreements to all landowners with property within a targeted

40 area. The landowners in the targeted wind farm area were given an opportunity to sign a wind

41 lease with the project if they wanted to. Some landowners chose to participate and others chose

42 not to participate. The targeted area changed over the years of development based on multiple

43 factors including but not limited to; landowner interest, environmental considerations, grassland

44 easements, wind speed and market demand for larger projects with lower energy costs.

45 Some of the individuals opposed to the project declined to participate in the project for varying

46 reasons. The project area was modified to focus on areas with a higher interest in using their land

47 for wind energy development. Because of these updates to the project area over time, facilities
48 are further away from unsigned properties not interested in participating in the project. We also
49 have some land signed outside of the current project area that is not eligible for a turbine because
50 their land is not located directly adjacent to the current project area.

51 **Q. Did you work with the County Agencies in coordination with the conditional use**
52 **permit (CUP) process and what efforts were made to address the concerns through the**
53 **CUP process?**

54 Yes. I participated in many of the meetings related to the Conditional Use Permit process with
55 Clark County.

56 A primary topic in the permitting process was related to the setback distance of turbines from
57 non-participating residences. The current county wind ordinance requires a minimum of a
58 1,000' setback from non-participating residences. Based on the concerns shared by some of the
59 non-participating residences and direction from the county, we took steps to address the concern
60 while attempting to retain the rights of neighboring landowners who signed up with the project
61 along with the need to keep the project competitive in the market. A primary step that we took
62 was to talk with signed landowners in the project that would be impacted by increasing this
63 setback beyond 1,000'. Prior to agreeing to double this setback to 2,000', I spoke with all of the
64 signed landowners that would be impacted by this change and they agreed to make this change
65 even though it would eliminate a possible turbine location on their property. In total, seven
66 turbine locations were dropped to make this change for the CUP process impacting multiple
67 signed landowners. We also took this same approach and agreed to drop one more turbine and
68 move another because of concerns raised about the turbine locations related to a private airstrip.
69 In total, we agreed to drop 8 turbine locations during the CUP process. This is in addition to

70 previous efforts to accommodate concerns.

71 As a part of the CUP process the county encouraged us to reach out to any residence owner

72 within ¾ mile of a turbine location and offer them an opportunity to participate in the project.

73 We followed through on their request and made these landowners the same offer as landowners

74 inside of the project area.

75 **Q. Is the current CUP compatible with project goals?**

76 The conditions on the CUP create major challenges for the project that other projects that

77 compete in the market don't have to comply with. We have appealed the CUP and are seeking

78 relief in the Circuit Court from the ¾ mile setback to non-participating residences and to clean

79 up some of the other conditions as well. The setback imposed by Clark County from non-

80 participating residence is almost four times the setback listed in their current wind ordinance.

81 This takes away significant landowner rights to signed landowners, creates significant economic

82 harm to the project including making the energy from the project more expensive to generate.

83 **Q. Will the project impede growth and development in the area?**

84 I believe the project will help with overall growth and development of the area. This area is

85 predominantly agricultural land. This wind farm will generate additional revenue for landowners

86 that they can use to improve their overall agricultural business and improve their ability to

87 develop of their land as they see fit. The additional revenue to the area will also benefit those

88 interested in growing businesses in and around the project area. The project will also create

89 demand for people to live around the project area because of the jobs generated by the project.

90 **Q. Does the project threaten the health, safety or welfare of the inhabitants of the area?**

91 No. The proposed project utilizes setbacks and protections typical of wind farms in the region

92 that are successfully operating without causing safety or welfare issues. I believe you will find

93 this to be confirmed by the studies provided along with testimony from our expert witnesses on
94 these topics.

95 From a practical standpoint, there are over 50,000 wind turbines operating in the United States. If
96 there was a significant problem with health, safety or welfare it would be commonly known and
97 accepted as fact. I am personally in touch with multiple people that currently live in and around
98 wind farms without problems to their health, safety or welfare.

99 **Q. Describe the information presented in Section 6.3.2 – Effects of Facility in Inducing**
100 **Future Development**

101 The business activity of operating the project will provide additional opportunities for new or
102 existing businesses that could provide products or services to the wind farm. The project will
103 provide direct revenue to the local area through lease payments, taxes, and donations. This
104 additional revenue could be used by those receiving the revenue to further develop the area as
105 they see fit. Additionally, because there are multiple businesses in South Dakota that
106 manufacture supplies used in wind farms it is possible that the project will have induced benefits
107 in the state.

108 **Q. Could you briefly summarize the information that you are responsible for in**
109 **Sections 7.0- ESTIMATED COST OF THE WIND ENERGY FACILITY (ARSD**
110 **20:10:22:09)?**

111 **7.1 Capital and Operational Costs**

112 Based on our experience of developing projects in this general region, the total installed capital
113 costs for the Wind Farm are estimated to be approximately \$ 1.5 million per MW with project
114 cost depending on project size and other variables including wind turbines, associated electrical
115 and communication systems, and access roads. Current internal projections for ongoing

116 operational costs for a 400 MW project are approximately \$11 million per year with the primary
117 costs associated with operations, maintenance, insurance, legal and labor costs. There are
118 additional ongoing operational costs for taxes and landowner payments as detailed below in my
119 testimony related to Section 20.2.1 – COMMUNITY IMPACT.

120 The total installed capital costs for the Transmission Line are estimated to be approximately \$6
121 million. Ongoing operations and maintenance costs and administrative costs are estimated to be
122 approximately \$100,000 per year.

123 **7.2 Site and Design Dependent Costs**

124 The overall cost of developing the Project will depend primarily on site selection and
125 construction timing. Site-dependent costs will include: the relative ease of access to the
126 individual wind turbine locations, site-specific subsurface conditions that determine foundation
127 design, access road design and layout, ease of underground work, and the layout of the turbine
128 arrays which affects road and electrical cable cost. Both underground and aboveground cable
129 may be employed to connect turbines, transformers, and the interconnect point. The underground
130 placement of cables is preferred.

131 **Q. Could you briefly summarize the information that you are responsible for in**
132 **Section 19.1 -TIME SCHEDULE (ARSD 20:10:22:22)– Land Acquisition?**

133 As the Project Manager, I managed land acquisition for the Project. Land was acquired by
134 Crocker for the Project through voluntary agreements with landowners. Land acquisition is
135 complete for the wind farm and transmission line proposed in the Application. Crocker may
136 either lease, secure easements or purchase the necessary parcels for the substation, O&M
137 facilities, and temporary laydown and staging areas.

138 **Q. Could you briefly summarize the information that you are responsible for in**

139 **Section 20.2.1 – COMMUNITY IMPACT (ARSD (20:10:22:23) - Socioeconomic and**
140 **Community Impacts – Wind Farm and Transmission Line Route?**

141 The Project is anticipated to provide positive short-term and long-term impacts to the local
142 economy. Construction activities for the Project would be limited to short-term effects. Increased
143 patronage of local commercial businesses, such as restaurants, grocery stores, hotels, and gas
144 stations, will result in increased business from construction related workers. Local contractors
145 and suppliers will be used for portions of the construction. Total wages and salaries paid to
146 contractors and workers in Clark County will contribute to the total personal income of the
147 region. Additional personal income will be generated for residents in the county and state by
148 circulation and recirculation of dollars paid out by the Applicant for business expenditures and
149 for state and local taxes. Expenditures made for equipment, fuel, operating supplies, and other
150 products and services benefit businesses in the county and the state.

151 Construction crews hired would include a variety of skilled and unskilled laborers. This diverse
152 workforce would include foremen, carpenters, iron workers, electricians, millwrights, and heavy
153 equipment operators. The increased labor force would be necessary for the installation of the
154 various Project components, including wind turbines, access roads, underground collector
155 system, O&M buildings, and transmission line structures. The Application includes a more
156 conservative number of construction jobs while NREL’s Wind Energy Jobs and Economic
157 Development Impact (JEDI) estimates peak construction jobs to be around 250 jobs. The JEDI
158 model also estimates labor during construction will cost approximately \$15.8 million and
159 includes hourly wages plus other employer costs including but not limited to: health benefits,
160 workers compensation, disability insurance, and social security. Actual numbers will be based on
161 a variety of factors. The Applicant anticipates that a majority of the short-term construction

162 positions would be filled by a labor force from outside the local community as there would not
163 be sufficient trained local labor to fill the number of jobs available. It is anticipated that many of
164 the short-term construction laborers would commute to the Project Area and limit the need for
165 additional temporary or permanent housing at the Project Area.

166 **Q. What long-term impacts are anticipated for the community?**

167 Long-term beneficial impacts to the county's tax base as a result of the construction and
168 operation of the Project will contribute to improving the local economy in this area of South
169 Dakota. In addition to the creation of jobs and personal income, the Project will pay
170 approximately \$1.8 million per year in taxes which will benefit the State of South Dakota,
171 School Districts, Clark County, and the townships in the Project Area. As mentioned above,
172 increased spending during the construction and operations periods would result in additional
173 personal income for local residents, as well as increased State and local tax revenues.
174 Participating landowners would receive direct economic benefit from lease payments for wind
175 turbines, transmission structures, and other Project infrastructure located on their property. These
176 payments would serve as a reliable, supplementary source of income.
177 As a utility scale wind farm, Crocker will require operation and maintenance positions which
178 will create job opportunities locally over the life of the Project. The exact numbers will vary over
179 time based on project needs; however, the JEDI model estimates a 400 MW project would create
180 around 18 jobs during the operating life of the Project and includes field technicians as well as
181 administrative and management positions. Labor estimates for these positions begin at
182 approximately \$1.1 million per year totaling over \$10 million the first 10 years of operation.

183 **Q. What impacts will the Project have on social services in the area?**

184 The Project is located in a predominantly rural setting and construction and operation will have
185 minimal impacts on social services for the local populace. The construction phase of the Project
186 is expected to be relatively short term lasting approximately 12-18 months, depending on
187 weather conditions and other factors. Crocker and its construction team will coordinate with first
188 responders, including but not limited to air ambulance, local sheriff's office(s) and local fire
189 services, to develop a safety plan during construction and operations of the Project. Crocker will
190 also be in contact with local first responders to offer information about the Project and to answer
191 any questions response teams may have regarding Project plans and details.

192 **Q. Will the Project have an adverse effect to the socioeconomic status of the Project**
193 **Area?**

194 The project will not pose a threat of serious injury to the socioeconomic condition of the project
195 area inhabitants. The short-term construction force will put minimal to negligible burden on
196 industry, housing, local labor market, regional health facilities, public infrastructure (water and
197 sewer systems), solid waste facilities, schools, fire protection, law enforcement, or other
198 community, government, or recreational facilities.

199 **Q. Can Crocker quantify the economic benefit to the local community?**

200 As previously stated, JEDI was utilized to estimate economic impacts to the state and local area.
201 The JEDI model calculated state and local economic impact during Crocker's construction phase
202 to be in the tens of millions of dollars. The primary impact areas are construction labor,
203 construction services, turbine or other supply chain impacts, and direct payments to landowners
204 during construction. The local economic benefit will vary based on products and services
205 available in the state and local area, project size, time of construction, contractor selected, turbine
206 model purchased, and other variables. Crocker plans to utilize as many local resources as

207 possible when commercially reasonable.

208 **Q. The Application stated the Project will pay approximately \$1.8 million per year in**
209 **taxes. Provide support for this figure.**

210 The 400 MW project is projected to have the following economic impacts to the area.

211 Direct Project Economic Impacts over 20 years of Operation (based on 400 MW project):

- 212 • Landowners Payments: ~\$46 million over 20 years (~\$2.3 million average per
213 year)
- 214 • Capacity and Production Tax: ~ \$36 million over 20 years (~\$1.8 million per
215 year) *Tax allocation details provided below.
- 216 • Community Fund: \$1.6 million over 20 years (\$80,000 per year)
- 217 • Full-Time Jobs: ~10-20 full time jobs totaling up to \$24 million over 20 years

218 Capacity and Production Tax Information Details:

219 The yearly tax projection is based on the Wind Farm Production and Capacity tax defined in SD
220 Codified Law Chapter 10-35 (16-21). The estimates are based on Crocker operating 400 MW's
221 of nameplate capacity and an operations profile designed by Crocker's experienced development
222 team. The actual amount paid will be based on current law and real operations of the year in
223 question. Allocations to taxing jurisdictions are projected below with conservative production
224 measures.

225 The total projected annual capacity and generation tax is projected to be around \$1.8 million per
226 year totaling ~\$36 million over 20 years distributed as follows:

227

- 228 • State of South Dakota: Approximately \$480,000 per year totaling \$9.6 million
229 over 20 years

- 230 • Clark County: Approximately \$462,000 per year totaling \$9.24 million over 20
231 years
- 232 • Townships: Approximately \$198,000 per year totaling \$3.96 million over 20
233 years
- 234 • School Districts: Approximately \$660,000 per year totaling \$13.2 million over 20
235 years
- 236 ○ Additional revenue for local school district (years 1-9 only): Amounts
237 vary per year totaling \$4.6 million in additional tax revenue over the first 9
238 years.
- 239 ○ Local revenue projected to offset state funding (years 6-20+): Amount
240 varies per year totaling \$8.6 million over years 6-20. SD Codified Law
241 13-13-10.1 (6B) specifies how school portion of tax is allocated over time.
242 In summary, one hundred percent shall be retained by the school district to
243 which the tax revenue is apportioned for the first five years of producing
244 power, eighty percent for the sixth year, sixty percent for the seventh year,
245 forty percent for the eighth year, twenty percent for the ninth year, and
246 zero percent thereafter.

247 **Q. Could you briefly summarize the information that you are responsible for in**
248 **Section 21.0 EMPLOYMENT ESTIMATES (ARSD 20:10:22:24)?**

249 Employment estimates for the Project are included in Section 20.2.1 of the Application and the
250 testimony above.

251 **Q. The Application stated a majority of the short-term construction positions would be**
252 **filled by labor force from outside the local community. Does Crocker plan to utilize the**
253 **available labor force in South Dakota?**

254 Yes, Crocker does plan to utilize the local labor force. South Dakota has several energy
255 technician education programs that provide specialized training related to working in the energy
256 field including wind farm service and operation. The Project hopes to benefit from graduates of
257 these programs and provide job opportunities for South Dakota residents that want to work in the
258 renewable energy industry and live near the Project Area. The Project will also create new local
259 job opportunities for various trade professions that live and work in the area. It is typical to
260 advertise locally to fill required construction positions. It is unlikely the local population will fill
261 all the required construction jobs and additional workforces are expected to move to the area for
262 the construction phase of the Project as needed. It is also anticipated that the operations and
263 maintenance of the Project will require specially trained individuals that will move within the
264 project vicinity to be driving distance from the Project Area.

265 **Q. What is the estimated percentage of temporary and permanent labor requirements**
266 **that will remain within the county and the township in which the facility is located after**
267 **construction is completed?**

268 The JEDI model projection estimates approximately 80% of the permanent operation and
269 maintenance jobs will be from the state and local area. Because many of the maintenance and
270 operation jobs will require the individual to be on-site to perform the job duties, we anticipate
271 that most of them will live within driving distance of the Project Area. It is unknown at this time
272 the number of individuals that will live in Clark County or specific townships.

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

274 **A. Yes.**

275

276 Dated this 27th day of September 2017.

277

278

279 Jay Hesse

A handwritten signature in cursive script, reading "Jay Hesse", is written over a horizontal line. The signature is positioned to the right of the printed name "Jay Hesse" on the line below.