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

SD PUC DOCKET EL-17-055

PREFILED REBUTTAL TESTIMONY OF MELISSA SCHMIT ON BEHALF OF CROCKER WIND FARM, LLC

April 13, 2018

I. INTRODUCTION AND QUALIFICATIONS

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

A. My name is Melissa Schmit. I am the Senior Permitting Specialist at Geronimo Energy, LLC ("Geronimo"), located at 7650 Edinborough Way, Suite 725, Edina, Minnesota.

Q. Briefly describe your educational and professional background.

A. I hold a Bachelor of Arts in Environmental Studies and Geography from Gustavus Adolphus College and a Juris Doctor from Hamline University School of Law. I have ten years of experience permitting various infrastructure at the local, state, and federal level. A copy of my curriculum vitae is provided as **Exhibit 1**.

Q. Did you provide Direct Testimony in this Docket on December 15, 2017?

A. No.

II. PURPOSE OF TESTIMONY

Q. What is the purpose of your Rebuttal Testimony?

A. The purpose of my Rebuttal Testimony is to address statements made in the prefiled Direct Testimony of Sheldon Stevens regarding Comsearch studies and related communications with the National Oceanic and Atmospheric Administration ("NOAA"), National Telecommunications and Information Administration ("NTIA"), and Western Area Power Administration ("WAPA"); alleged impacts on the social condition of the community; coordination with South Dakota Game Fish and Parks ("GFP"); and statements regarding Project accessibility. I will also address comments made in the Direct Testimony of Tom Kirschenmann regarding potential mitigation considerations, and comments made in the Direct Testimony of Darren Kearney regarding turbine flexibility.

Q. What exhibits are attached to your Rebuttal Testimony?

A. The following exhibits are attached to my testimony:

- **Exhibit 1**: Curriculum Vitae
- **Exhibit 2**: Microwave Study Report
- **Exhibit 3**: Communication Tower Study
- **Exhibit 4:** Land Mobile & Emergency Services Report
- **Exhibit 5**: AM and FM Radio Report
- **Exhibit 6**: Off-Air TV Analysis
- **Exhibit 7**: Constraints Maps

III. COMSEARCH STUDY AND RELATED COMMUNICATIONS

Q. In his testimony, Mr. Stevens takes issue with the Comsearch Study conducted for the Project because it did not include specific turbine locations and did not include the current Project boundary (see ln. 124-148). Has an updated Comsearch study been conducted for the current Project configuration and boundary?

A. Yes. Although it is not typical for turbine locations to be provided for a Comsearch study, Crocker provided the current configuration and Project boundary to Comsearch and requested updated microwave path and communication tower studies. The updated studies are attached to my testimony as Exhibit 2 and Exhibit 3, respectively. In addition, we asked Comsearch to conduct land mobile/emergency services, AM/FM radio, and television reception studies, which are attached as Exhibit 4, Exhibit 5, and Exhibit 6, respectively.

Q. Could you please discuss the results of the updated microwave path study?

A. The Microwave Study identified 120 microwave paths intersecting the Crocker Wind Farm ("Project") Area. The Fresnel Zones of the microwave paths were calculated and mapped. Turbine 155 was found to intersect the two dimensional Fresnel Zone of one microwave path. Based on a cross sectional analysis, the turbine will clear the microwave path if it is built with the minimum blade size and maximum hub height. If not, the turbine location has a risk of obstructing the microwave path and

potentially causing signal degradation. Turbine 7 was found to be sited close to, but not within, an existing path.

Q. How will Crocker ensure the two turbines identified do not obstruct microwave paths?

A. Crocker will shift turbine 155 within the existing survey corridor if the dimensions of the final turbine selected would cause interference. Additionally, per the Comsearch recommendation, caution will be taken if turbine 7 requires adjustment to ensure the turbine does not intersect the beam path.

Q. Could you please discuss the results of the updated communication tower study?

A. The Communication Tower Study identified three tower structures and ten communication antennas within or near the Project Area. These structures and antennas are used for microwave, TV, and land mobile services. The report recommended an impact assessment should be performed for each service type, which Crocker has completed.

Q. Could you please summarize the results of the land mobile/emergency services study?

A. The Land Mobile and Emergency Services Study indicated the Project is not anticipated to adversely impact first responder, industrial/business land mobile sites, area-wide public safety, or commercial E-911 communications. Each network is designed to operate reliably in a non-line-of-sight environment and many land mobile systems are designed with multiple base transmitter stations that cover a large geographic area with overlap between adjacent transmitter sites in order to provide handoff between calls. This means any signal blockage caused by the wind turbines does not materially degrade the reception, as the end user is likely receiving signals from multiple transmitter locations. In addition, the frequencies of operation for these services have characteristics that allow the signal to propagate through wind turbines.

Q. Is there a recommended setback from land mobile fixed-base stations to avoid impacts to communication services?

A. Yes. As long as turbines are located more than 77.5 meters from the land mobile stations, they will meet the setback distance criteria for the Federal Communications Commission ("FCC") interference emissions in the land mobile bands.

Q. Does the Project configuration meet this setback distance?

A. Yes. The closest turbine distance from a land mobile station is 440 meters. Any additional micrositing that may be required for the Project will be completed to remain in compliance with the FCC setback distance.

Q. Could you please summarize the results of the AM/FM radio study?

A. No impacts on the licensed and operational AM or FM broadcast stations were identified.

Q. Could you please summarize the results of the off-air TV study?

A. The study identified four full-power digital stations that may have their reception disrupted in and around the Project. Impacts could result from obstruction of the line-of-sight between the residences relying on transmission sent over the air for TV reception and the TV station antennas. However, the actual impact isn't known, since modern digital TV receivers may mitigate the effects of signal scattering. Television reception at homes relying on cable or satellite television service will not be impacted by construction or operation of the Project.

Q. How will Crocker mitigate potential reception disruption?

A. If interference to a residence's or business's television service is reported to Crocker, Crocker will work with affected parties to determine the cause of interference and, when necessary, reestablish television reception and service. Crocker will address any post-construction television interference concerns on a case-by-case basis and resolution could include installing a combination of high gain

antenna and/or a low noise amplifier or entering into an agreement to provide a monetary contribution toward comparable satellite television services.

Q. Could you please address Mr. Stevens' comments regarding potential Project impacts to the Aberdeen weather radar, including Crocker's communications with the NOAA?

A. Mitigation measures will not be required for the Aberdeen weather radar. While the response received from the NOAA dated April 4, 2016 indicated a portion of the Project falls within the Notification Zone and outlines mitigation strategies that can be implemented to reduce impacts to radar, the response also states "NOAA will not request mitigation of impacts for this project configuration."

Crocker submitted an updated request to the NTIA based on the expanded Project boundary on November 16, 2017. The response received on January 11, 2018 stated input was received from numerous agencies, including the Department of Commerce, and NOAA is within the Department of Commerce. All agencies stated No Harmful Interference Anticipated ("NHIA") and no agencies had issues with the turbine placement in the Project Area.

IV. SOCIAL CONDITION OF COMMUNITY

Q. Mr. Stevens makes a number of allegations regarding impacts of the Project on the "social condition of the community" at lines 89-109 of his testimony. In particular, Mr. Stevens states that "Crocker directly, and through its surrogates, orchestrated intimidation and harassment of individual intervenors and non-participants" (ln. 99-100) and then describes alleged incidents (ln. 100-109). Are Mr. Stevens' allegations true?

A. No. Crocker has no knowledge of or information regarding the alleged incidents. Moreover, Crocker has not engaged in or asked others to engage in any form of intimidation or harassment.

Q. Has Crocker engaged in community outreach?

A. Yes. As Mr. Stevens acknowledges in his testimony, Crocker held monthly coffee meetings in Clark (see Stevens Direct Testimony, ln. 33). Crocker also attended Clark County Commission Meetings to provide updates on the Project throughout development, held meetings with business and civic community stakeholders, hosted an ice cream social for the community, and participated in numerous community charity events.

Additionally, Crocker representatives met with individuals to provide Project information and address concerns. Jay Hesse and Michael Morris met with Mr. Stevens several times to address his concerns. Crocker then voluntarily eliminated a turbine and moved another turbine to try to address Mr. Stevens' concerns regarding the use of his private airstrip (see Stevens Direct Testimony, ln. 31-47; see Morris Rebuttal Testimony, p. 1, ln. 21-30).

V. PROJECT ACCESSIBILITY

Q. Mr. Stevens states in his testimony that it would be "extremely difficult" to construct and maintain a wind farm in some of the Project footprint because some of the land is only accessible by low-maintenance and no-maintenance dirt roads (ln. 203-205). Does Crocker agree with this assertion?

A. No. Construction of the proposed access roads within the Project Area, combined with any necessary upgrades to the existing road system, will enable construction and operation of the Project as proposed.

VI. COORDINATION WITH GFP AND MITIGATION

Q. Mr. Stevens testifies that he "spoke with the local GFP Conservation Officer last fall and was surprised to hear him say that he was never contacted for information on area wildlife, waterfowl migration, eagle nest sites, etc." (ln. 61-63). Do you have a response?

A. Yes. At this point, Crocker has been coordinating with the GFP for several years regarding wildlife and avian use in and around the Project Area through letters and e-mails, in-person meetings, a site visit with GFP representatives, and conference calls. This coordination included providing Project updates, engaging in discussions on and receiving approval of survey protocol, and discussions on Project siting.

Q. In his testimony, Mr. Kirschenmann discusses potential "mitigation considerations" for the Project, particularly with respect to native prairie. Does the Project plan to provide mitigation for impacts to native prairie?

A. As discussed in Brie Anderson's Rebuttal Testimony, Crocker is providing a 2:1 offset for permanent impacts to USFWS grassland easements, although only a 1:1 offset is required (see Anderson Rebuttal Testimony, p. 4, ln. 26-29). Additionally, while Crocker does not believe mitigation is required, Crocker will provide a voluntary donation of $25,000 to a local non-profit conservation organization to be used for local conservation efforts.

VII. TURBINE FLEXIBILITY

Q. In his testimony, Mr. Kearney states that he cannot support Crocker's request for the flexibility to shift turbines within 1,000 feet of their proposed location even if specified noise and shadow flicker thresholds at occupied residences are not exceeded, cultural resources and sensitive species habitat are avoided, and wetland impacts are avoided. Could you explain in more detail why Crocker is requesting this turbine flexibility?

A. Yes. There are several reasons why Crocker is making this request:

- First, while the cultural resource survey work completed to date has been incorporated into the proposed turbine configuration, additional shovel testing will be completed in the spring of 2018, which is likely to result in some turbine shifts (see Holven Rebuttal Testimony, p. 8, ln. 4-28).

- Second, in order to determine the appropriate foundation design, Crocker will complete geotechnical evaluations at each turbine site to identify the soil

structure. Based on the geotechnical information, it may be necessary to shift turbine locations.

- Third, although landowners are aware of the proposed turbine locations, when the turbine locations and associated access roads are staked on their property prior to construction, the landowners may see shifts they would like us to make. When possible, Crocker tries to accommodate landowner requests, but it would be difficult to do so without some assurance that the move could be accomplished without additional approval that may delay construction.

- Fourth, any adjustment to a turbine location must comply with a host of constraints. For example, Crocker must meet property line and residence setback requirements, must meet sound and shadow flicker requirements, and has committed to avoiding impacting cultural resources and wetlands. Without the requested 1,000 feet of turbine flexibility, it may be impossible to meet all of the applicable constraints. This is illustrated in the constraints maps attached to my testimony as Exhibit 7. The maps depict the applicable setbacks and environmental avoidance areas, as well as the proposed 1,000 foot micrositing area. The maps also include call-out boxes that show individual turbines and the constraints within 325 feet, 500 feet, and 1,000 feet of the proposed turbine locations. As can be seen from the call-outs, there are situations where it may be difficult or impossible to shift a turbine within 325 feet or 500 feet and comply with setbacks and environmental avoidances, but it would be possible to shift the turbine with 1,000 feet of flexibility (see, for example, turbine 7). Notably, these maps do not account for the sound or shadow flicker requirements, which are additional constraints. Further, based on the shovel testing conducted in the fall of 2017, turbine shifts of up to 1,200 feet were required to avoid the cultural resources identified and comply with or avoid all other applicable constraints (see Holven Rebuttal Testimony, p. 8, ln. 14-28).

- Fifth, in the past, wind project developers have had substantial micrositing flexibility, as they did not have to identify final turbine locations until 30 days prior to construction. Here, Crocker is only asking for 1,000 feet of flexibility.

Given the reasons outlined above, Crocker believes its request for turbine flexibility of 1,000 feet, with the specified limitations, is reasonable and necessary to enable compliance with applicable requirements and Crocker's commitments to avoid cultural resources and wetlands. Crocker hopes this additional information helps to further clarify for Staff the need for the 1,000 foot turbine flexibility that Crocker is requesting.

VIII. CONCLUSION

Q. Does this conclude your Rebuttal Testimony?

A. Yes.

Dated this 13th day of April, 2018.

Melissa Schmit