

**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**

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**STAFF’S SEVENTH SET OF DATA
REQUESTS TO CROCKER WIND
FARM, LLC**

EL17-028

Below, please find Staff’s Seventh Set of Data Requests to Crocker Wind Farm, LLC. Please submit responses within 10 business days, or promptly contact Staff to discuss an alternative arrangement. In addition, please specify the responder when answering each interrogatory. Should any response have subparts answered by more than one individual, identify the respondent by subpart.

7-1) Referring to the initial testimony of Mr. Rodney Christman, beginning at line 30, does the Applicant contend that the conversion of wind into electricity, as described in SDCL 49-41B-2(13) constitutes agriculture? If so, explain.

Patrick Smith: Many of our landowners view participating in the wind energy project as part of their agricultural activities. Some have called wind energy “an extraordinary seed crop” because it’s revenue is consistent and the price does not fluctuate with the market. It would not be unreasonable for a governmental entity to determine that agricultural uses include wind energy. Wind energy has been a part of the agricultural landscape for centuries, for milling, pumping and electrical generation. In addition, the sale of commodities made from natural resources on the land are typically part of agricultural activities. Installation of equipment to extract resources has also been part of agricultural activities. Farmers and ranchers commonly use windmills as part of the power source for a remote facility such as a barn, pump or irrigation pivot. The difference between what Crocker is proposing and the farmer with a windmill powering his shed is the commercial arrangement; an arrangement common to other agricultural activities thus making the use a direct line to agricultural practices, the differences are not material.

7-2) Refer to Figures 2a through 2d. Provide the proposed project layout of all four turbine layouts on one map, using a similar scale as reflected in Figures 2a, 2a.1, 2a.2, 2a.3, and 2a.4. Identify the proposed turbine locations that work with multiple turbine models.

Melissa Schmit: Refer to attached maps.

- 7-3) Provide the map requested in Staff Data Request 7-2 including all exclusion and avoidance areas, similar to Figure 10. Label the exclusion and avoidance areas and drivers for those exclusion and avoidance areas. Provide a reduced project area acreage estimate from the 29,331 acres sited in the Application to reflect all exclusion and avoidance areas.**

Melissa Schmit: Refer to attached maps. It is Crocker's understanding that "exclusion" and "avoidance" areas are not defined by the SDPUC and therefore, the maps represent regulatory setbacks. USFWS managed grassland easements, wetlands within wetland easements, and other features identified through on-going surveys may require avoidance or additional permits and approvals, but are not precluded from development. The Project Area is approximately 17,782 acres outside the regulatory setbacks.

- 7-4) Refer to the initial testimony of Mr. Patrick Smith.**

- a) What turbine layout did the FAA evaluate through the Obstruction Evaluation process?**

Patrick Smith: The FAA reviewed an earlier version of the layout that did not include the changes made in response to public comment in the County Conditional Use Permit process as well as some design refinements that Crocker made.

- b) What type of change to the turbine layout would require Crocker to refile the project with the FAA?**

Patrick Smith: The FAA maintains a frequently asked question list on their website¹ that provides some guidance on this issue, in addition the full rules pertaining to obstacle evaluation, Title 14, Code of Federal Regulations, Part 77 (14 CFR Part 77), provide more detail. Below we provide excerpts of some of the key points from the FAA's website on when to file and refile as well as what to do if your location or height changes.

3. How do I know whether I'm required to file an FAA Form 7460-1, Notice of Proposed Construction or Alteration?

You may use the Notice Criteria Tool link on the home page to determine whether notice is required. The tool is based on Title 14, Code of Federal Regulations, Part 77 (14 CFR Part 77). There is a link to Part 77 on the home page of the website. Section 77.9 identifies construction or alteration requiring notice; Section 77.9(e) identifies construction or alteration not requiring notice.

If notice is required, you may submit the FAA Form 7460-1 electronically on the website. If you don't have an account for e-filing, there are instructions on the home page for setting up your account and e-filing the notice ("Click Here for Instructions on how to E-file your proposal with the FAA").

4. When should I submit my notice?

Because of the extensive studies that wind turbines require, we request that you file notice at least 90-120 days before planned construction. The aeronautical study process includes evaluations by various lines of business, and any identified impacts must be resolved before a final agency determination is issued. A public notice may also be required which includes a 30-day comment period, adding additional time to the aeronautical study. There is no guarantee that a final agency

¹ <https://oeaaa.faa.gov/oeaaa/external/searchAction.jsp?action=showWindTurbineFAQs> accessed October 17th, 2017

determination will be issued by your planned construction date, so file as early as possible. 14 CFR Part 77 does not carry provisions for waivers or exemptions, so there is no way to shorten or bypass this process. We also recommend that you provide early notice to DOD and DHS to determine if your proposal may impact their mission. Please see FAQ #23 – the FAA needs the exact location/height of each wind turbine along with specific information in order to evaluate any potential impacts to the National Airspace System (NAS).

17. I've received a Determination of No Hazard to Air Navigation for my structure. I've learned that the coordinates or height may be different than those noted in my determination. Am I required to file a new 7460-1 with the FAA?

Generally, a new study is not required if the coordinates are within one second of the coordinates AND the overall AMSL is equal to or lower than the AMSL as listed on the determination letter.

A new study (7460-1) is required for any of the following changes:

- (a) A survey was required to mitigate an adverse effect and there is any change in coordinates.
- (b) The latitude and/or longitude changes by exactly 1 second or more. For example: Initial latitude 37-00-50.00 – new study is not required for 37-00-49.01 to 49.99, or 37-00-50.01 to 37-00-50.99; a new study is required for 37-00-49.00 or 37-00-51.00.
- (c) The overall AMSL (site elevation + height above ground level [AGL]) increases by 1 foot or more.
- (d) A new filing is required any time there is a change to the frequencies or use of greater power.

If a new study is required based on a height increase or coordinate changes of 1 second or more, you must submit a New Case (Off Airport) prior to the start of construction so the FAA may evaluate your proposal at the revised height or location. If you do not file for a new study prior to the start of construction as required and you submit the Supplemental Notice (FAA Form 7460-2) instead, the system will recognize the changes and initiate a new study. When the new study is initiated you will be required to certify the new information and submit a new filing so the FAA may evaluate your structure under a new Aeronautical Study Number (ASN). NOTE: It is not a given that the proposal at the revised height or location will result in a favorable determination.

21. Where did the Micro-siting check box go?

The term “Micro-siting” was an industry term that had no useful meaning for studies conducted in accordance with 14 CFR Part 77. Affording the opportunity for e-filers to check a box indicating this seemed to add to an unrealistic expectation of a shortened/abbreviated study and favorable determination. Every study went through the same process whether it was identified as being “micro-sited” or not. Because of the false impression given by allowing this term to be used, it was removed.

22. We've received Determinations of No Hazard to Air Navigation on our proposed wind farm. Now we want to refile for taller turbines. Can we keep the original determinations intact until the FAA issues new determinations?

If you refile for a height increase on a proposed structure, your previous determinations will be terminated. It is our policy to terminate any previous determinations if you refile for a greater height. It causes an administrative hardship on the FAA to carry multiple filings at the same location. Other organizations that evaluate impacts cannot filter out the filings, and this creates a cumulative impact issue. With the multitude of wind turbine filings throughout the U.S., cumulative impact is based on the total number of turbines in an area. Multiple filings in the same location creates a cumulative impact issue that could result in erroneous data analysis. Additionally, obstruction evaluation specialists cannot work out an accurate lighting plan with multiple filings.

The FAA recommends that wind turbine developers work out necessary financial arrangements that are not dependent on maintaining an existing determination if refiling is necessary. The FAA is not responsible for financial arrangements associated with determinations that may have been placed upon you by your financial institute, insurance provider, etc.

7-5) Refer to the initial testimony of Mr. Rodney Christman, lines 68 - 79.

a) Which turbine layout was used for the estimated feet from the residences?

Melissa Schmit: The V110 layout.

b) Provide the estimated distance from each residence listed using the other three turbine layouts.

Jay Hesse: Because the other layouts simply remove some turbine locations from the V110 layout, the other layouts would have the same or greater distance from residences. The Vestas V110 layout represents the maximum number of turbines for the Project and providing the

distance from each residence using the other layouts with fewer turbine locations has the potential to be misleading when the V110 layout represents the maximum Project impacts.

- c) **Refer to Section 22.0 in the Application. It states “The Applicant requests that the SDPUC approve the Project for up to 400 MW and 200 turbine locations as shown on the preliminary Vestas V110 layouts in this Application, *with the understanding that a different turbine model may be used, some of the turbine locations shown may ultimately be relocated or not be constructed as part of the Project or, alternately, that additional turbine locations may be required.*”** *(emphasis added)*
- i. **Based on the request to relocate, eliminate, or add turbines from the Vestas V110 layout, what confidence do the residents listed in testimony have that the distance provided in the proposed layout from their residence will be reflected in the final layout? Could a turbine be moved closer, or a new turbine added, based on the request made in Section 22 of the Application?**

Melissa Schmit: If a proposed turbine location is moved, it would need to meet all required setbacks as well as the noise and voluntary shadow flicker standards discussed in Crocker’s Application. Some changes may result in a closer position; however, that position would still meet all of the requirements under local, state, and federal law.

- ii. **Is Crocker asserting that the setback stated in testimony for these individual residences will be reflected in the final layout?**

Jay Hesse: Refer to response in 7-5 (c)(i) and 7-5 (d).

- d) **Refer to letter filed by Crocker on September 5, 2017. If the Applicant implements the permit the box concept as stated on Page 2 of the letter, is it true that the setbacks from each residence listed in testimony could be 2,000 feet? If no, explain.**

Jay Hesse: At a minimum, the Project will meet the Clark County setbacks required by law following the results of the current appeal of the CUP conditions. Should the SD Circuit Court rule in Crocker’s favor, the overall commitment remains that the Project will not site turbines closer than 2,000 feet from a non-participating residence.

From a practical project development standpoint, turbine layouts remain generally the same because of the significant work that has gone into the design. Turbine shifts could occur prior to construction for a variety of reasons including but not limited to: engineering, micro-siting efforts, construction input, geo-technical studies and environmental survey results. Crocker is aware of the concerns of non-participating residences and will make commercially reasonable efforts to avoid moving turbines significantly closer to these non-participating residences.

7-6) Please provide a cost estimate to repair roads back to their preconstruction conditions after project construction. Include any data sources used to support the cost estimate.

Melissa Schmit: This is done as part of final engineering and will depend on the plans for road upgrades as well as the turbine delivery plan. Crocker is unable to provide an accurate cost estimate until these processes are complete. Crocker will enter road agreements with Clark County and the impacted townships prior to construction and are expected to provide detailed engineering and financial security. Pursuant to SDCL 49-41B-38, Crocker will furnish an indemnity bond to secure the restoration and repair of roads after construction.

7-7) Does Crocker know how it will mitigate the Department of Commerce's and Department of Energy's concerns about the project possibly impacting radio frequency transmissions and weather radar, if needed? Will any of the mitigation measures require individual turbine locations to be moved from the layouts provided in the Application?

Melissa Schmit and Michael Morris: The FAA review circulates to the weather radar operators allowing them to map the layout on their radar system to create a mask that then allows them to screen the interference from their forecasting. Please note the DOC/DOE do not anticipate impacts to critical tornado detection and have stated the Project could impact precipitation estimates over the northern portion of the Project that falls within the NOAA "Notification Zone." Additional potential mitigation to ensure accurate rainfall measurements could include installing rain gauges or additional weather stations in the northern portion of the Project. Crocker does not anticipate mitigation will include moving turbine locations.

Dated this 19th day of October, 2017.



Melissa Schmit