

February 20, 2020

Ms. Tanowa Troupe, Secretary
Ohio Power Siting Board
Docketing Division
180 East Broad Street, 11th Floor
Columbus, Ohio 43215-3797

Re: Case No. 18-1607-EL-BGN - In the Matter of the Application of Firelands Wind, LLC for a Certificate of Environmental Compatibility and Public Need to Construct a Wind-Powered Electric Generation Facility in Huron and Erie Counties, Ohio.

Response to Eighth Data Request from Staff of the Ohio Power Siting Board

Dear Ms. Troupe:

Attached please find Firelands Wind, LLC's ("Applicant") response to the Eighth Data Request from the staff of the Ohio Power Siting Board ("OPSB Staff"). The Applicant provided this response to OPSB Staff on February 20, 2020.

We are available, at your convenience, to answer any questions you may have.

Respectfully submitted,

/s/ Christine M.T. Pirik

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Ms. Tanowa Troupe
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CERTIFICATE OF SERVICE

The Ohio Power Siting Board's e-filing system will electronically serve notice of the filing of this document on the parties referenced in the service list of the docket card who have electronically subscribed to these cases. In addition, the undersigned certifies that a copy of the foregoing document is also being served upon the persons below this 20th day of February, 2020.

/s/ Christine M.T. Pirik

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4839-7957-0101 v1 [59714-18]

**BEFORE
THE OHIO POWER SITING BOARD**

In the Matter of the Application of Firelands Wind,)
LLC for a Certificate of Environmental Compatibility)
and Public Need to Construct a Wind-Powered) Case No: 18-1607-EL-BGN
Electric Generation Facility in Huron and Erie)
Counties, Ohio.)

**FIRELANDS WIND, LLC'S RESPONSE TO THE
EIGHTH DATA REQUEST
FROM THE STAFF OF THE OHIO POWER SITING BOARD**

On January 31, 2019, as supplemented on March 18, 2019, April 11, 2019, July 10, 2019, and September 12, 2019, as revised on October 4, 2019, Firelands Wind, LLC (“Applicant”) filed an application (“Application”) with the Ohio Power Siting Board (“OPSB”) proposing to construct a wind-powered electric generation facility in Huron and Erie Counties, Ohio (“Project”).

On February 7 and 11, 2020, the Staff of the OPSB (“OPSB Staff”) provided the Applicant with OPSB Staff’s Eighth Data Request. Now comes the Applicant providing the following responses to the Eighth Data Request from the OPSB Staff.

1. **As used on page 192 or Table 08-14 of the Application, please describe and define the following phrases “anticipated lease agreement”, “Anticipated Lease Status”, “Participating”, and “Non-Participating.”**

Response: Terms are defined as follows:

- a. Anticipated lease agreement: This term means that the Applicant either currently has or anticipates having prior to construction a signed lease, collection, transmission, or setback waiver agreement. If an agreement for a parcel is not in effect at the time of construction, the Applicant will not utilize the parcel for facilities or setbacks
- b. Anticipated Lease Status: This term refers to the anticipated status of a given parcel for a signed lease, collection, transmission, or setback waiver agreement. If an agreement for a parcel is not in effect at the time of construction, the Applicant will not utilize the parcel for facilities or setbacks
- c. Participating: This term refers to the anticipated status of a given parcel for a signed lease, collection, transmission, or setback waiver agreement at the time of

construction. If an agreement for a parcel is not in effect at the time of construction, the Applicant will not utilize the parcel for facilities or setbacks. For parcels identified in the application as participating, the Applicant either currently has or anticipates having prior to construction a signed lease, collection, transmission, or setback waiver agreement

- d. Non-participating: This term refers to the anticipated status of a given parcel for a signed lease, collection, transmission, or setback waiver agreement at the time of construction. If an agreement for a parcel is not in effect at the time of construction, the Applicant will not utilize the parcel for facilities or setbacks. For parcels identified in the application as non-participating, the Applicant does not currently anticipate having a signed lease, collection, transmission, or setback waiver agreement prior to construction

Communications

2. Exhibit Q, Evans Engineering Solutions Report pps. 47-49

- a. **Have you notified *The Wolf* (FM 92.1 WOHF) radio station about the Emerson Creek Wind Farm project?**

Response: The Applicant has not notified *The Wolf* (FM 92.1 WOHF) radio station about the Emerson Creek Wind Project. If requested, notice can be sent.

- b. **Has the FCC recommended or required an exclusion distance, buffer, or setback for *The Wolf* (FM 92.1 WOHF) radio station's antenna/tower 1239981? If so, what is that distance (in feet).**

Response: The Federal Communications Commission ("FCC") has not recommended or required an exclusion distance, buffer, or setback for *The Wolf* (FM 92.1 WOHF) radio station's antenna/tower 1239981. There is no known FCC requirement or recommendation of a minimum separation distance between a Frequency Modulated ("FM") broadcast transmitting site and a utility-scale wind turbine.

- c. **Please further describe the "capture effect" of an FM receiver and how that will avoid, mitigate, or minimize disruption to of *The Wolf* (FM 92.1 WOHF) radio station and FM antenna/tower 1239981.**

Response: The "capture effect" is a fundamental characteristic of FM radio frequency signals. It describes how the FM radio receiver is able to capture the strongest signal on the frequency the receiver is tuned to or an adjacent frequency, so only the desired station (usually the one providing the strongest signal to the receiver) is demodulated and converted to audio, thus no other stations with weaker signals on the subject frequency or one adjacent to it (usually stations further away) are heard. This contrasts with Amplitude Modulated ("AM") signals, where the receiver can demodulate two or more signals on the same or adjacent frequency and are audible at the same time. Instances of multiple AM

stations being heard at one frequency setting is more noticeable at night, when conditions exist for AM signals to travel farther distances than during daylight hours. Sometimes, wind turbines will cause scattering of FM signals, resulting in signals reflected by turbines reaching an FM receiver in or near a wind farm along with the direct signal. Reflected signals have the potential to interfere with the reception of the direct signal (referred to as "picket-fencing"), but because reflected signals are usually weaker than the direct signal and the capture effect of FM suppresses weaker signals on the same frequency, interference to the direct FM signal by reflections off turbines almost never occurs.

d. What is the far field distance (in feet) of the radiating FM antenna/tower 1239981?

Response: The distance to the edge of the far-field of an antenna, also called the Fraunhofer distance, is calculated by the equation $dff = 2D^2/\lambda$, where D is the largest dimension of the antenna (for an FM antenna, its length) and λ (pronounced "lambda") is the wavelength of the frequency of interest. From FCC records, the antenna used by WOHF is a five-bay half-wave spaced antenna and the frequency is 92.1 MHz (from Table 5 in Exhibit Q to the Application). The wavelength at 92.1 MHz (the value of λ in the above formula) is 10.7 feet. A five-bay half-wave spaced FM antenna is 24.4 feet long (the value of D in the above formula). Thus, using the above formula, the far-field distance dff is determined to be 111 feet.

Surface Waters

3. The GIS files submitted show collection lines crossing three Category 3 wetlands (W1M-133, W2M-063 and W2M-066). Within these wetlands, stream crossings will also occur (S1M-011-1, and S1M-107). It appears that all three stream crossings are labeled as HDD sites, however it is unclear if the Category 3 wetlands will be crossed via HDD. Please clarify. If impacts will not be avoided to all Category 3 wetlands, please explain to Staff why they cannot be avoided, how they will be crossed, and all mitigation plans if necessary.

Response: Impacts will be avoided for all Category 3 wetlands that collection lines are crossing by crossing them via Horizontal Directional Drilling ("HDD"). Five Category 3 wetlands were indicated to be crossed via trenching in the application, these five wetlands (W1M-032, W2M-063, W2M-066, W1M-124, and W1M-133) will instead be crossed via HDD.

Respectfully submitted,

/s/ Christine M.T. Pirik

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Summary: Response to Eighth Data Request from Staff of the Ohio Power Siting Board
electronically filed by Christine M.T. Pirik on behalf of Firelands Wind, LLC