South Dakota Public Utilities Commission
Triple H Wind Project, LLC
Docket EL 19-007
Response to Staff's Sixth Data Request

Date: June 24, 2019

Data Request:

6-1) Refer to Table 12-1 of the Application.

a) Please explain the basis for a 256 ft. setback from participating landowner property lines.

b) Has the Applicant received written agreements from all participating landowners to allow a shorter setback than required in SDCL 43-13-24? Please explain.

c) For the landowners that signed the written agreements in (b), please explain how it was communicated to participating landowners that the risks associated with ice throw are mitigated with a 256 ft. setback from property lines.

Responses:

a). Engie has internal standards for wind turbine setbacks that we use on all projects. One of which is verify that there is no turbine blade overhang of a property line. In this case, a minimum standard of 256 feet was used where waivers were obtained as is referenced in Table 12-1. If waivers were not obtained, the array is in compliance with SDCL 43-13-24. Based on the statute, the setback distance at a minimum must be 1.1 times the tip height or greater, which equates to 535 feet.

b). Yes. Necessary written agreements have been received for a few turbines that were within 535 feet of an adjacent property owner. The balance are all located greater than 535 feet from the property lines and did not require waivers, with the exception of two turbines two turbine locations. There is a large parcel that was signed under easement in 2015. At some point the ownership of the parcel was subdivided into 4 tracts of lands under separate ownership, but with the easement still in place. We were not aware of the ownership change until after the application was filed. Subsequently, we are working with the landowners to obtain waivers on two parcels under the same ownership. We expect to sign the waiver, but can easily relocate the turbines about 100-200 feet and be in compliance with SDCL 43-13-24.

c). The 256-foot setback is unrelated to ice throw. It was a minimum setback distance that was used by Engie where landowners had signed waivers in compliance with SDCL 43-13-24.

Response Prepared by:
Casey Willis

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Data Request:

6-2) Please describe the technology that will be employed at each turbine to detect and assess ice buildup.

Responses:
GE offers an ice detection solution system called a Winter Ice Operation Mode (WIOM) product. The WIOMs system is used to detect when there is ice on the buildup and modifies operations to protect the machine. Triple H intends to use this product at the Triple H Wind Project.

Response Prepared by:
Casey Willis

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Data Request:

6-3) Refer to the Safety Manual provided in response to Commission Staff data request 1-12.
a) Refer to Section 8.4. Is Triple H installing an ice detector as discussed in the Safety Manual?
b) If the answer to (a) is no, please provide documentation from General Electric confirming that the technology being employed by Triple H to assess and detect ice buildup alleviates the need to cordon off an area during freezing weather conditions pursuant to the formula identified in Section 8.4.1.

Responses:
Yes, Triple H will use an ice detection system offered by GE. Please see the attached response from GE regarding the WIOMs system that will be used for the Triple H Wind Project.

Response Prepared by:
Casey Willis

From: Amirault, Tom (GE Renewable Energy)
To: WILLIS Casey (ENGIE North America)
Subject: RE: GE Safety Manual Question
Date: Tuesday, June 11, 2019 6:02:03 AM

Hi Casey,
Thank you for your email.
GE confirms that the WIOM system functions as an ice detector pursuant to the references in section 8.4.1 of GE's safety manual, *Operating_Manual_1-2MW_Safety_EN_r02*.
With the WIOM system, GE recommends a setback distance of 1.1*tip_height with a 170 m minimum to address ice throw away from the following example objects of concern: Public use areas, residences, office buildings, public buildings, parking lots, public roads, and railroads. Property lines are not considered an object of concern subject to ice throw setback recommendations. GE recommends that turbines are set back a distance of 1.1*blade_length from property lines, provided there is remote chance of future development or inhabitancy during the life of the wind farm.

Let me know if this suffices.

Regards,

Tom

Tom Amirault
Wind Technical Leader
GE Renewables
(518) 389-8197

From: Casey.Willis@engie.com <Casey.Willis@engie.com>
Sent: Friday, June 7, 2019 3:14 PM
To: Amirault, Tom (GE Renewable Energy) <tom.amirault@ge.com>
Subject: EXT: GE Safety Manual Question

Hi Tom,

In the GE Technical Documentation Wind Turbine Generation System 1&2 MW Platform Safety Manual, GE recommends the use of an ice detector to detect ice buildup. Triple H Wind Project, LLC is intending to use GE's Winter Ice Operation Mode (WIOMs) product as a method to detect ice buildup for the Triple H Wind Project. Can you confirm that this is considered an "ice detector" pursuant to the references in Section 8.4.1 of the GE's safety manual?

Second, will you please confirm that with the use of the WIOMs system, the GE recommended setback from roads, residences, and buildings to address ice throw is 1.1 times tip height?

Finally, can you please confirm that GE does not recommend a 1.1 times the tip height setback from property lines for ice throw?

Casey

Casey Willis
Senior Project Developer

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