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March 4, 2020

By email: Pamela.Monroe@sec.nh.gov

New Hampshire Site Evaluation Committee
Attention: Pamela G. Monroe, Administrator
21 S. Fruit Street, Suite 10
Concord, NH 03301-2429

Re: Antrim Wind Energy – Status update on the Aircraft Detection Lightning System

Dear Ms. Pamela G. Monroe,

This letter provides a status update on the Aircraft Detection Lightning System (ADLS) at the Antrim Wind Energy facility (AWE). First, we want to clarify that the ADLS was commissioned prior to the Commercial Operation Date (COD) of December 24, 2019. Moreover, each of the two radars composing the system were verified by the manufacturer and obtained their acceptance test report on December 21st, 2019 (as the report contains confidential commercially sensitive information, we have enclosed an excerpt from the report cover letters for each radars).

Under normal operation, the ADLS shuts off the aerial obstruction lights when the system can confirm that the sky is clear of any aircraft vehicle within the vicinity of AWE. If one of the radars cannot confirm a clear sky during dark hours, the aerial obstruction lights will be turned on by the ADLS. Typical causes are anecdotic icing event[1], temporary loss of permanent echo[2], radar fault (e.g. motor tripping), etc. Causes such as these may lead to the aerial obstruction lights being on for 24-72 hours. This is standard operation of the ADLS and complies with Federal Aviation Administration (FAA) requirements. The ADLS communication and operational status are also checked at least once every 24 hours by TransAlta's Wind Control Center (WCC).

Between COD and early February, the ADLS was under normal operation as described above (which included from time to time periods when the lights were on during dark hours). On Saturday February 15, 2020, the motor of the 30m radar tripped. As the ADLS needs both radars in operation to confirm clear sky, the ADLS turned on the lights as required. The manufacturer investigated the situation and reset the motor on February 18. Unfortunately, on February 20, the 30m radar motor tripped again. After a second review by the manufacturer, a new motor was ordered. The motor has been received today (March 4) and a crew is planned to be mobilized at the site on March 6. We expect the system to resume its normal operation during the week of March 9.

[1] Ice that builds-up on the radar itself temporary preventing its proper operation.
[2] The system performs continuous checks on the persistence of distinguishable permanent/fix echo.

In addition to the examples that require aerial obstruction lights to be turned on as explained above, maintenance and/or repairs, such as the current events related to replacing the motor, that are not completed during a single work day could likely lead to the lights being turned on during the night. Although we are able to respond quite quickly to operational matters because of the WCC, and AWE works closely with the system manufacturer to plan normal course maintenance and repair, certain events will require longer than desired periods of time to ensure proper parts and components can be procured for the safe and proper operation of AWE and its ADLS.

As requested, AWE will notify you of any future unforeseen outages of the ADLS. AWE suggests that as a threshold, and to avoid notifying you for typical causes (e.g. icing events), AWE will provide notice by email where AWE reasonably believes that an ADLS outage will last longer than 48 hours.

We wish to reiterate that TransAlta is committed to the safe operation of all of its facilities including AWE.

Regards,

TRANSALTA CORPORATION

Ethan Mollasalehi, P. Eng.
Antrim Wind Energy Lead Technician & Mechanical Engineer

Encl

Site Acceptance report excerpt for the radar on the 100 m tower

COMPANY UNCLASSIFIED

SCANTER 5000 Series Site Acceptance Test For OLC/ADLS application

Doc. no: 905302-TG, Rev: A

Annex A Report

Project name	Antrim 2		Site / Other information:
Customer	TransAlta		Antrim 2 100m tower
Project no	4069301		
Project manager	Christian Heidemann Ladefoged		
GPS:	Lat: 43.061003		
	Long: -72.011981		
Transceiver configuration	SCANTER 5202	☒ OLC/ADLS	
Transceiver Power	☒200 W		

	Name	Signature	Date
Performed by	Michael Rahbek	TERMA Terma A/S Hovmarken 4 DK-8520 Lystrup T +45 8743 6000 F +45 8743 6001	21 dec. 2019
Customer accept by	Jeff Nelson		Jan 24, 2020
Witnessed by			
Witnessed by			
Witnessed by			
Witnessed by			

Site Acceptance report excerpt for the radar on the 30 m tower

Annex A Report

Project name	Antrim ADLS		Site / Other information:
Customer	TransAlta		Antrim 1 30m tower
Project no	4069301		
Project manager	CHHL		
GPS:	Lat: 43.058775		
	Long -72.017136		
Transceiver configuration	SCANTER 5202	☒ OLC/ADLS	
Transceiver Power	☒ 200 W		

	Name	Signature	Date
Performed by	Michael Rahbek	TERMA	21 dec 2019
Customer accept by	Jeff Nelson	Jeff Nelson	Jan 24, 2020
Witnessed by			
Witnessed by			
Witnessed by			
Witnessed by			