

August 14, 2020

VIA E-MAIL

Mr. Brian Johnson
Special Assistant Attorney General
North Dakota Public Service Commission
600 E. Boulevard, Dept. 408
Bismarck, ND 58505-0480

**RE: Meadowlark Wind I LLC
New Frontier Wind Energy Project
Case No. PU-11-69**

Dear Mr. Johnson:

Enclosed please find Meadowlark Wind I LLC's responses to North Dakota Public Service Commission Staff's Data Requests, dated August 2, 2020.

If you have any questions, please let me know.

Sincerely,



MOLLIE M. SMITH

MMS/70722075

Encl.

cc: Curtis Sheptycki (via e-mail, w/ encl.)
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Response to data request
Meadowlark Wind I LLC
Mollie Smith, Fredrikson&Byron, P.A.

NORTH DAKOTA PUBLIC SERVICE COMMISSION

**RESPONSES TO DATA REQUESTS
MEADOWLARK WIND I LLC (Case No. PU-11-69)**

Below please find Meadowlark Wind I LLC's responses to North Dakota Public Service Commission Staff's data requests, dated August 2, 2020. By agreement with Mr. Brian Johnson, the deadline to respond to the data requests was extended to August 17, 2020.

1. NDPSC Question No. 1: Who is the manufacturer of your ADLS system and what systems are in place to collect data regarding ADLS operations?

RESPONSE: Vestas is the manufacturer of the IntelliLight system and respective software. Individual components, such as the radar antenna and transceiver, are supplied from other vendors. The system data is being collected and recorded on Vestas servers.

By: Meadowlark Wind I LLC, with input from Vestas

a. Can the system determine if an aircraft caused the mitigation of the ADLS system or if it was caused by something else?

RESPONSE: The system enters in a flashing (lights on) state for two reasons. Either the radar detected a target (light-triggering activity) inside the warning zone or, due to a system failure, the system enters into auto flash mode for safety reasons.

Regarding the targets inside the warning zone, the system itself cannot distinguish between, for example, an aircraft or a flock of birds. These targets are usually from aircraft, but due to the system's high sensitivity, they can also be generated by vehicles, animals (e.g., birds) or noise.

By: Vestas

b. Please provide in percentages what is mitigating the ADLS system.

RESPONSE: Please see above, the system cannot distinguish the source of the mitigation.

By: Vestas

2. NDPSC Question No. 2: Typically, what percentage of the lights are required to be in continuous operation?

RESPONSE: Normally all lights should be off if the ADLS system is not detecting a target. Additional relevant information is provided below.

By: Meadowlark Wind I LLC, with input from Vestas

a. Please provide the reason for their continuous operation.

RESPONSE: In specific cases where one or only a few lights are in continuous operation, it is because the radar system is not able to communicate with those specific SLCs (strobe light controller). If all lights are flashing, then a target was detected on the warning zone or the system is in fail-safe mode.

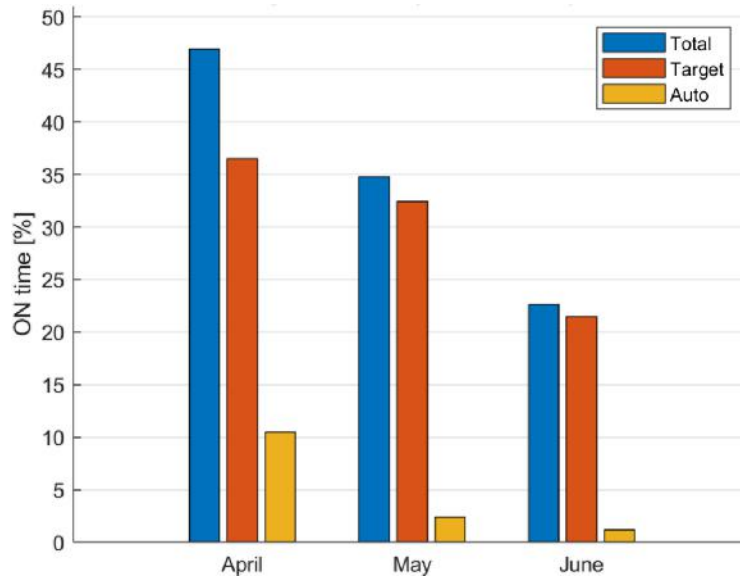
By: Vestas

3. NDPSC Question No. 3: Typically, how often are the lights mitigated by the ADLS system?

RESPONSE: Please see the response to Question No. 3a below.

a. Please provide the response in percentage of time they are mitigated.

RESPONSE: Vestas is currently analyzing the New Frontier log data from the past quarter of 2020. The data is depicted in the graph below, which shows the amount the lights were on during the night due to either target detection (Target) or due to a fail-safe mode (Auto), as well as the sum of both (Total).



By: Vestas

b. If there is a large variance between projects, please list them individually.

RESPONSE: This is the first ADLS that Capital Power has installed on any of its facilities. There is no additional data to compare with, at this time.

By: Meadowlark Wind I LLC

4. NDPSC Question No. 4: What are the impediments to more frequent light mitigation?

RESPONSE: One of the biggest issues ADLS operators face in the United States is a 30 minute light time out that is part of the Federal Aviation Administration's ("FAA") rules. If a target is detected and lost inside the warning zone, even if (for example) triggered by birds or noise, the FAA's rules require the system to trigger a light event for 30 minutes. This is higher than in other countries – for example, in Australia, the time out is only 6 minutes.

By: Vestas

5. NDPSC Question No. 5: What other data or information can you provide based upon the company's experience with ADLS so far?

RESPONSE: As noted in response to Question No. 3b, this is the first ADLS that Capital Power has installed on any of its facilities. There is no additional data to compare with, at this time.

By: Meadowlark Wind I LLC