

September 6, 2017

Ms. Barcy F. McNeal, Secretary
Ohio Power Siting Board
Docketing Division
180 East Broad Street, 11th Floor
Columbus, Ohio 43215-3793

Re: Case No. 16-1871-EL-BGN, In the Matter of the Application of Icebreaker Windpower Inc. for a Certificate to Construct a Wind-Powered Electric Generation Facility in Cuyahoga County, Ohio.

Responses to First Set of Interrogatories from Staff of the Ohio Power Siting Board

Dear Ms. McNeal:

Attached please find Icebreaker Windpower Inc.'s ("Applicant") responses to the First Set of Interrogatories from the staff of the Ohio Power Siting Board ("OPSB Staff"), which were provided to the Applicant on August 17, 2017. The Applicant provided these responses to OPSB Staff on September 6, 2017.

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

Respectfully submitted,

/s/ Christine M.T. Pirik

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Enclosure

Cc: Stuart Siegfried
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COLUMBUS 63172-1 75331v1

**BEFORE
THE OHIO POWER SITING BOARD**

In the Matter of the Application of Icebreaker)
Windpower Inc., for a Certification to)
Construct a Wind-Powered Electric) Case No. 16-1871-EL-BGN
Generation Facility in Cuyahoga County,)
Ohio.)

**ICEBREAKER WINDPOWER INC.'S RESPONSES TO THE
FIRST SET OF INTERROGATORIES
FROM THE STAFF OF THE OHIO POWER SITING BOARD**

On February 1, 2017, as supplemented, Icebreaker Windpower, Inc. ("Applicant") filed an application ("Application") with the Ohio Power Siting Board ("OPSB") proposing to construct a wind-powered electric generation facility in Lake Erie off the shore of Cleveland, in Cuyahoga County, Ohio ("Project").

On August 17, 2017, the Staff of the OPSB ("OPSB Staff") provided the Applicant with OPSB Staff's First Set of Interrogatories. Now comes the Applicant providing the following responses to the First Set of Interrogatories from the OPSB Staff.

1. The proposed project would consist of 6 turbines, but the Applicant identified 7 potential turbine sites. Describe how the Applicant plans to use the additional turbine location in its final siting determination.

Response: A determination will be made during the final design phase of the foundation based on an exploration of the precise geophysical parameters at each of the seven turbine sites. The alternative location will not be used for the Project.

2. What is the current schedule to a) begin construction, b) complete construction, and c) place the facility in service?

Response: Work at the onshore substation and the construction of the underground conduit for the submarine cable would begin in the summer of 2018. The current plan is to begin the marine construction/installation, i.e., the foundations, submarine cable, and wind turbines, in

June 2019 and complete the marine construction/installation by the end of September 2019. Under the current plan, testing and commissioning of the facility would follow the completion of the marine construction/installation and the facility would be placed in service by December 2019. As is the case with any complex construction project, there are many factors that drive the schedule, including, but not limited to, receipt of major approvals and permits by December 31, 2017, with receipt of the remainder of approvals in the first quarter of 2018. Delays in any one of the critical activities leading up to the beginning of construction could extend the schedule. Depending on the extent of potential delays, construction could be pushed to 2020 because the construction cannot be performed during the fall and winter months due to weather.

3. The application (p. 39) indicates that the Applicant has updated its interconnection application to PJM and resubmitted it to PJM in July 2016. The application further indicates that the updated PJM studies will be provided to Staff upon completion. Provide the status of these updated PJM interconnection studies, along with an estimate for when the study will be released to Applicant by September 30, 2017.

Response: PJM completed the update to the System Impact Study based on the Applicant's updated PJM application. The updated study is currently in the PJM review process. It is estimated that the study will be released to Applicant by September 30, 2017. Once the Applicant receives the updated studies, they will be provided to OPSB.

4. The Application (p. 12) refers to the fog horns with visibility detectors planned for installation on two of the turbine platforms. Both fog horns will apparently sound every 30 seconds. Describe (a) how the visibility detectors factor in to the frequency of the horns sounding, and (b) if the foghorns would be audible at the shoreline.

Response: The visibility detectors sense fog and visibility according to the standards of the U.S. Coast Guard ("USCG") and they will automatically turn on during foggy conditions. Once triggered, the fog horns will sound. When the signal on turbine 1 is triggered it would sound at 670 megahertz ("MHz") once every 30 seconds. At turbine 6, the signal would sound at 670 MHz *twice* every 30 seconds. At this point, Applicant cannot confirm the ultimate decibel

level of the fog horn because Applicant has not chosen the manufacturer and model of the fog horn(s) to be used. All manufacturers provide something similar to the following example specification: the unit is a two (2.0) Nautical Mile (audible equivalent) Omni-directional fog signal emitting a 360-degree beam of sound in the horizontal plane. The fog horns are to be audible for 2 miles from the turbines per USCG regulations. Therefore, they will not be audible at the shoreline. Applicant would also note that the fog horns currently on the Cleveland Water Intake Crib, which is located 3.5 miles from shore, are not equipped with visibility sensors and are, therefore, on 24x7; these fog horns are not heard from the shoreline.

5. The application (p. 30) indicates that a preliminary Department of Defense ("DOD") screening concluded that the proposed turbines would not interfere with military radar. Will a final screening be conducted, and if so, when will that be completed?

Response: Given the results of the first screening, it is not anticipated that an additional screening will be necessary. However, if there are further changes to the Project location or the turbine height, Applicant will alert the National Oceanic and Atmospheric Administration ("NOAA") for reanalysis. *Also See* Response to Interrogatory No. 10 below.

6. The Applicant has prepared a Navigational Risk Assessment or NRA (Exhibit R of the application).

(a) The application (p. 66) refers to this NRA as a preliminary assessment – what steps remain to finalize this assessment, and when will those steps be completed?

(b) Page 4 of the NRA indicates that the majority of disturbed sediments from the cable installation process would settle back on the lakebed within hours. What is the basis for this conclusion? Provide details on any reports or studies used to support this conclusion.

(c) Page 14 of the NRA indicates that yachting organizations will be contacted in an effort to minimize project impacts. If this has occurred, please summarize the results of this effort. If this has not yet occurred, provide an approximate schedule for when these conversations will be initiated.

(d) The NRA refers to a control center that would be manner 24 hours a day. Where would this control center be located?

(e) Given that there appears to be significantly more boat activity in the area of the electric collection line (compared to the proposed turbine locations), how does the Applicant proposed to minimize impacts (if any) to such traffic during the collection line installation?

(f) The NRA (p. 24) refers to shutdown procedures that can be implemented in the event of an emergency. Provide additional details on the emergency shutdown procedures, including the time required for such shutdown to occur.

Response:

(a) Since the submission of the Application, the NRA has undergone review by the USCG. The NRA was updated, based on requests and comments for additional information by the USCG. The final NRA has additional information, appendices, and figures. The final NRA has been included as Appendix R to the Draft Environmental Assessment ("EA"), which was prepared for the Project by the U.S. Department of Energy ("USDOE") and posted on August 18, 2017. The final NRA is available at <https://energy.gov/nepa/downloads/ea-2045-draft-environmental-assessment>). The Applicant will provide OPSB Staff with the final NRA.

(b) This conclusion was based on our review of reports done for another project (the ITC Lake Erie Connector Project), as well as familiarity with the sediment type and quality at the Project site based on the geotechnical and geophysical work done to date for the Applicant. The issue of sediment suspension and resettling is more thoroughly discussed in the EA, section 3.3.2.1 and Appendix E to the EA. The Draft EA can be accessed at <https://energy.gov/nepa/downloads/ea-2045-draft-environmental-assessment>.

(c) Forest City Yacht Club and Lakeside Yacht Club have been provided notice of the Project, in accordance with the service requirements set forth in Ohio Administrative Code Chapter 4906-3. Once the Project is permitted and the construction schedule is determined with greater precision, Applicant will develop a communications and outreach plan that will include

notification to various interest groups, including yachting organizations, about the timing, duration, and specifics of Project construction and ongoing operations. Applicant will work to ensure users of Lake Erie know well ahead of time about construction and operations to minimize any potential impacts on their lake activities.

(d) The control center will be located at the Operations and Maintenance building.

(e) The cable installer will have safety and guard vessels to keep boaters out of the area impacted by the laying of cable during the approximate one-week period the cable is installed.

(f) Emergency shutdowns occur within seconds. Examples of situations that trigger emergency shutdowns include: control center signal, excessive vibration, lightning strike, and other pre-programmed conditions. The turbines can be shut down by the operator or by the turbine itself. The turbines have a set of procedures based on data that tells the controller when to shut down the unit. For example: if the wind goes above 27.5 miles per second, the turbine shuts down; if a sensor or group of sensors indicate the turbine is too warm, the turbine shuts down; if it is hit by lightning, it shuts down; and, if there is too much ice on the blades and there is unacceptable vibration, the turbine shuts down.

7. Will the exterior of the turbines, including the blades, be cleaned periodically? If so, how often? What kinds of cleaning solutions, if any, will be used, and would they have any negative impacts on water quality?

Response: The blades are inspected at least once a year. Cleaning of the blades occurs upon inspection, detecting build-up of material (such as dirt, dust, and bugs) that effect performance. Cleaning is done by technicians who use biodegradable solutions that have no impact on water quality.

8. The Application (p. 48) refers to one or more road use agreements. What is the current status of such agreements.

Response: The Applicant anticipates that the majority of the large Project components will be transported via ship or rail. However, the Applicant continues to have discussions with the city of Cleveland and Cuyahoga County regarding the potential use of the roads and bridges in those areas for other components of the Project. The Applicant is committed to entering into an appropriate road use agreement(s).

9. The application (p. 60) discusses three levels of containment intended to prevent any discharges of fluids (oil, hydraulic, cooling, etc.) from the turbines. Would an unexpected decrease in any of the turbine fluids trigger an immediate electronic notification to the control center? If yes, describe the procedure for responding to such an event.

Response: An unexpected decrease in any turbine fluid would trigger an alarm at the control center. The problem would be investigated and appropriate action would be taken, the action would depend on the precise problem identified. A decision would be made whether and when to go to the unit depending on the nature of the problem identified. The turbines have a set of procedures based on data that tells the controller when to shut down the unit. For example, if the gearbox oil reads low, but the second gearbox oil sensor, flow meter, and radiator read ok, then that indicates a faulty sensor and it will be fixed the next time the technician goes to the unit. The same is true for all fluid containing components; they have multiple and redundant sensors and action will be taken according to the exact conditions detected. The design of the turbine is such that leaks, when detected, will cause the turbine to shut down. Since these decisions are proprietary to each turbine manufacturer, it is impossible to know exactly the conditions that will trigger an action.

10. Exhibit V of the application includes a concern raised by the Department of Commerce ("DOC") regarding potential radar impacts. The communication includes a list of potential mitigation strategies. Provide an update as to the status of the concern raised in Exhibit V.

Response: Subsequent to submission of the Application, Applicant consulted with the DOC on the Project's potential to impact NEXRAD radar. Upon further consultation with the DOC, it was determined that the turbines would penetrate only the lowest elevation angle of the radar. Therefore, there will be minimal impacts to radar from the Project, satisfying the concerns of the DOC. If there are further changes to the Project location or the turbine height, Applicant will alert the NOAA for reanalysis.

11. The application (p. 55) lists multiple permits that the Applicant expects to obtain prior to the start of construction. Detail the status of each of those permits.

Response: Detailed below is the status of each permit:

(a) Section 404/10 Permit: The applications for the Section 404 and Section 10 permits were submitted to the U.S. Army Corps of Engineers ("USACE") on August 25, 2017. Applicant anticipates receiving the final permit by December 31, 2017.

(b) Section 401 Water Quality Certification ("WQC"): The application for the Section 401 WQC will be submitted upon receipt of the USACE Public Notice for the Section 404 Permit (a 401 WQC Application requirement). Applicant anticipates submitting the Section 401 WQC Application to the Ohio Environmental Protection Agency ("OEPA") by the end of September 2017 and receiving the permit by March 1, 2018.

(c) Section 408 Approval: Applicant submitted an Application for Section 408 approval to the USACE on February 3, 2017. Conversations with the USACE indicate that the Approval, with a special condition to address the potential for future deepening of the Navigation channel, will be finalized by the end of August 2017.

(d) Coastal Zone Management Act Consistency Determination: The Coastal Zone Consistency Statement and supporting documentation were submitted to the USACE as a part of the Section 404/10 Application. The USACE will coordinate with Ohio Department of Natural Resources ("ODNR") for the Coastal Zone Consistency.

(e) Finding of No Significant Impact ("FONSI") pursuant to the National Environmental Policy Act ("NEPA"): The Draft EA was prepared by the USDOE, with cooperation of the USACE and the USCG. A public informational open house will be held on September 6, 2017. The deadline for written comments is October 10, 2017. A FONSI determination is expected by December 31, 2017.

(f) USCG Private Aid to Navigation: Applicant will submit an Application for a Private Aid to Navigation upon receipt of a FONSI determination. This is anticipated by March 1, 2018.

12. The application (p. 64) indicates that the Applicant is working with ODOT Office of Aviation to ensure the project will not have any aviation impacts. Detail the status of this effort?

Response: Ohio Department of Transportation approval was received on April 17, 2017. *See Attachment A to these responses.*

13. The application (p. 65) indicates that a final determination had not yet been issued by the FAA. Provide any available updates, if not fully addressed by Attachment 7 of the Applicant's Supplemental Filing on 3/13/2017.

Response: The Federal Aviation Administration issued its Determination of No Hazard to Navigation on February 22, 2017. It was included in the Supplement to the Application filed with the OPSB on March 13, 2017.

14. The application (p. 132) refers to a resolution approved by the Board of Directors of the Port of Cleveland. Provide a copy of that resolution.

Reponses: See Resolution adopted on October 23, 2013, which is being produced herein as Attachment B.

15. Has the Applicant approached the County for payment in lieu of taxes (PILOT)? If so, detail the status of such request.

Response: The Applicant is in the process of communicating with the Cuyahoga County regarding the PILOT application and resolution. As yet, nothing has been finalized.

16. The application (p. 67) indicates the nacelles will be equipped with a fire suppression system. Provide details on this system.

Response: The main objective of the Smoke and Heat Detection System ("Detection System") is to provide robust detection of heat and or smoke in the nacelle and switch gear compartments. The Detection System is also an integral part of the turbine which identifies the time and location of arc detector events—it shuts down the wind turbine generator ("WTG") by tripping the switchgear and an alarm will sound in the turbine. The Detection System consists of a number of intelligent fire detectors, which comprise optical smoke and thermistor temperature sensors. To mitigate the risk of false alarms, the detectors operate in a mode where both smoke and heat must be detected to trigger an alarm. An alarm results in WTG shutdown and notification sent via SCADA (Supervisory Control and Data Acquisition). The Vestas turbine fire detection system utilizes an independent communication line separate from all others in the turbine and conforms to the EN54 standard (mandatory European fire detection and fire alarm standard). The fire protection controller is a stand-alone "watchdog" controller and, therefore, works even if the WTG controller is not up and running and the turbine is off.

17. Is the Applicant aware of any summer marine events in the vicinity of the project area, and if so, does the Applicant propose any steps to avoid or minimize impacts to such events?

Response: Summer marine events are listed in the NRA, Exhibit R to the Application. The Applicant is not aware of any major marine events that would be impacted by the Project construction or operation. However, informing the yacht clubs and event organizers of the Project, pursuant to the Communications and Outreach Plan discussed in response to question 6.c above, will help avoid and minimize any impacts on any events that could be affected.

Respectfully submitted,

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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 this case. In addition, the undersigned certifies that a copy of the foregoing document is also being served upon the person below via electronic mail this 6th day of September, 2017.

/s/ Christine M.T. Pirik

Christine M.T. Pirik (0029759)

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Administrative Law Judge:

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Attachment A

Response to Question 12 OPSB Staff 1st Set of Interrogatories

/s/ Christine M.T. Pirik

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OHIO DEPARTMENT OF TRANSPORTATION

OFFICE OF AVIATION • 2829 W. DUBLIN-GRANVILLE ROAD

COLUMBUS, OHIO • 43235-2786

JOHN KASICH, GOVERNOR • JERRY WRAY, DIRECTOR

April 17, 2017

LEEDCo
Attn: Lorry Wagner
1938 Euclid Avenue
Cleveland, OH 44115

Proposal: Wind Turbine
Lat: N41°-36'-2.8"
Lon: W81°-48'-2.2"
Height: 479 ft AGL 1048 ft AMSL

Subject: CONSTRUCTION PERMIT
Aeronautical Study No: 2017-DOT-652 to 658-OE (2016-WTE-5048 to 5054-OE)

To Whom It May Concern,

In response to the application received on the above date concerning the proposed construction described above, a study has been conducted under provisions of Ohio State Law Chapter 119, Section 4561.34 of the Revised Code to determine whether proposed construction would be an obstruction to air navigation. The findings of that study are as follows:

The proposed construction exceeds obstruction standards adopted under Section 4561.32 of the Ohio Revised Code, but will not affect the safe and efficient use of the airports nor effect the safety of persons and property on the ground. However, the following applies to the construction proposed:

[X] Notice is required if the project is abandoned or modified; maximum height 1048 feet AMSL.

[X] Obstruction Marking and/or Lighting is required.

[X] The structure should be obstruction marked and lighted per current FAA Advisory Circular (AC 70/7460-1L) Change 2 "Obstruction Marking and Lighting".

[X] Required lighting SHALL be maintained in operable condition.

[X] Compliance is mandatory with the FAA conditions of approval.

This authorization to initiate construction of the subject proposal expires on 8/22/2018 unless it is extended, revised or terminated by the Ohio State Department of Transportation. This permit does not exempt you from contacting local zoning authorities regarding compliance with local zoning ordinances.

If you have any questions, please call (614) 793-5040 or (614) 466-6804.

Respectfully,

ODOT Office of Aviation
2829 W. Dublin-Granville Road
Columbus, OH 43235

Attachment B

Response to Question 14 OPSB Staff 1st Set of Interrogatories

/s/ Christine M.T. Pirik

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RESOLUTION NO. 2013-32

A RESOLUTION DECLARING THE POSITION OF
THE CLEVELAND-CUYAHOGA COUNTY PORT AUTHORITY
WITH RESPECT TO A PROPOSED LEASE OF SUBMERGED LANDS
FOR THE LAKE ERIE ENERGY DEVELOPMENT CORPORATION

WHEREAS, the Cleveland-Cuyahoga County Port Authority ("Port Authority") has been advised that the Lake Erie Energy Development Corporation ("LEEDCo") has requested that the State of Ohio lease submerged lands for the purpose of installing electricity generating wind turbines (the "Project"); and

WHEREAS, under the terms of Section 1506.11 of the Ohio Revised Code, any persons wishing to develop or improve lakefront lands within the jurisdiction of a port authority and wishing to lease adjacent submerged lands from the State of Ohio, must first obtain a Resolution from such port authority that such lands are not necessary or required by such port authority and that the land requested is in accordance with the permissible land use under the waterfront plan of such port authority; and

WHEREAS, upon review and examination of the proposed Project, in the form presented to the Board, it has been determined such improvements do not constitute an unlawful encroachment on navigation and water commerce; and

WHEREAS, the Maritime Committee at its October 17, 2013 meeting has recommended that the Board of Directors adopt this Resolution.

NOW, THEREFORE, BE IT RESOLVED by the Cleveland-Cuyahoga County Port Authority Board of Directors, Cleveland, Ohio:

Section 1. That the Board determines that improvements described: 1) do not constitute an unlawful encroachment on navigation and water commerce; 2) are not necessary or required by the Port Authority for the construction, maintenance or operation of its maritime facilities; and 3) are not inconsistent with any waterfront development plan of the Port Authority.

Section 2. That this Resolution may be submitted by LEEDCo to the State of Ohio in accordance with Section 1506.11 of the Ohio Revised Code.

Section 3. This Resolution may be amended, modified, replaced, or revoked should the Port Authority subsequently find that the LEEDCo Project is materially modified from the form expressed in LEEDCo's September 3, 2013, Application for Submerged Land Lease to the Ohio Department of Natural Resources such that the findings made in Section 1 of this Resolution are no longer true. The Port Authority staff shall notify LEEDCo that, as a condition of approval, it must advise the staff of the Port Authority of any material modifications to the Project so that the

Port Authority can review the findings made in Section 1 of this Resolution for the purposes expressed in this Section 3.

Section 4. That all formal action of the Board of Directors of the Cleveland-Cuyahoga County Port Authority concerning and relating to the adoption of this Resolution were adopted in an open meeting of the Board of Directors and that all deliberations of this Board of Directors and any of its committees that resulted in such formal actions were in meetings open to the public in compliance with all legal requirements including Section 121.22 of the Ohio Revised Code.

Section 5. That this Resolution shall take effect immediately upon its adoption.

Adopted: October 23, 2013

Yeas: 7

Nays: 0


CHAIR


SECRETARY



Resolution No. 2013-32
Adopted 10.23.13

This foregoing document was electronically filed with the Public Utilities

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in

Case No(s). 16-1871-EL-BGN

Summary: Response to First Set of Interrogatories from Staff of the Ohio Power Siting Board electronically filed by Christine M.T. Pirik on behalf of Icebreaker Windpower Inc.