

**BEFORE  
THE OHIO POWER SITING BOARD**

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

**ICEBREAKER WINDPOWER INC.'S RESPONSES TO THE  
THIRD 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 September 27, October 5, and October 13, 2017, the staff of the OPSB (“OPSB Staff”) provided the Applicant with OPSB Staff’s Third Set of Interrogatories. In accordance with the process agreed to with OPSB Staff, the Applicant provided responses to OPSB Staff’s Third Set of Interrogatories via email on October 6, October 10, and October 16, 2017. Now comes the Applicant formally filing the following responses to the Third Set of Interrogatories, which were previously provided to OPSB Staff via email.

**September 27, 2017 Interrogatories – October 6, 2017 Responses**

1. **4906-4-07 (E)(1): What form of communication was used to notify the nearby aviation facilities? Please confirm this correspondence; for example: attach the generic letter of notification if mail was used.**

**Response:** Letters were sent to all nearby aviation facilities notifying them of the Application and the proposed Project. The notices were sent to hospitals, emergency responders, and law enforcement agencies with helipads, as well as the Burke Lakefront Airport. See **Attachment A**, which contains the letters sent to such facilities.

2. **4906-4-07 (E)(1): Will construction equipment comply with FAA and ODOT penetration and lighting requirements?**

**Response:** Yes. The Applicant will comply with all penetration and lighting requirements of the Federal Aviation Administration and the Ohio Department of Transportation.

**October 5, 2017 Interrogatories –October 6, 2017 Response**

3. **What is the maximum volume of fluids (oil, hydraulic, cooling) that a single turbine would hold at one time?**

**Response:** The maximum combined total of fluids (oil, hydraulic, cooling) is approximately 1,530 liters (404 gallons.).

- 4) **For the leased area around the turbines, how far does the leased property extend from the turbine base?**

**Response:** The turbine base is approximately 18 meters (59 feet) in diameter and the lease area is approximately 30 meters (98.4 feet) in diameter. Therefore, the lease area extends out approximately 12 meters (39 feet) past the edge of the foundation.

- 5) **Please confirm that the electric line construction corridor does not contain any known areas of toxic material or areas of open lake placement for dredging material (see Cleveland Water letter).**

**Response:** The electric line corridor does not pass over or near any known areas of open lake placement for dredging materials or other known areas of toxic material. The closest distance to the any open lake placement site is 2 miles. See **Attachment B**, which shows the open lake placement site 2 miles away.

- 6) **The Applicant will use water spray (or other appropriate dust suppressant measures) if necessary during construction at the substation site, correct?**

**Response:** Yes. The Applicant will use water spray if necessary.

7) **Are there any pipelines installed in the lake in the vicinity of the turbine locations or the electric line route?**

**Response:** According to all available public information, National Oceanic and Atmospheric Administration ("NOAA"), the Port of Cleveland, the U.S. Army Corps of Engineers ("USACE"), the U.S. Coast Guard ("USCG"), Cuyahoga County, and the City of Cleveland, there are no known pipelines in the vicinity of the turbine locations or the electric line route.

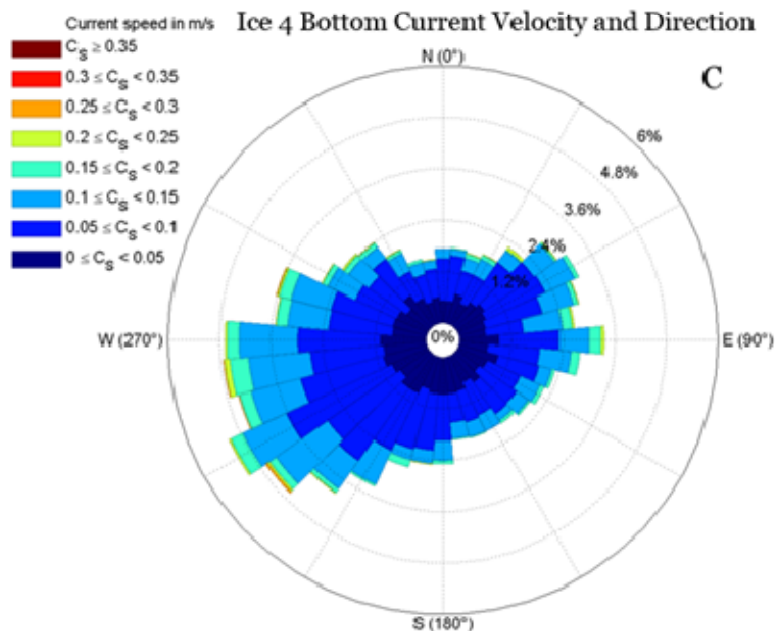
8) **Are the 4 water intake structures shown on Figure 08-1 all Cleveland Water facilities?**

**Response:** Yes. The intake structures are all Cleveland Water facilities.

9) **Page 77 of the application indicates that the general flow of Lake Erie in the project vicinity is east to west. Please confirm or correct.**

**Response:** Yes. The general flow of Lake Erie in the Project vicinity is east to west.

See current rose below.



**2016 Lake Bottom Current Velocity and Direction at ICE4**

Note: Spokes represent the frequency of currents moving towards a particular direction

**October 13, 2017 Interrogatory –October 16, 2017 Response**

- 10) **The OPSB application proposes a project with a total capacity of 20.7 MWs, comprised of 6 turbines sized at 3.45 MWs/per. However, the PJM Revised System Impact Study appears to have evaluated a project with a maximum capacity of 18 MWs. Why is there a difference between the capacity figures in the OPSB application and the PJM SIS? And what are the implications of this difference, if any, from an operational perspective?**

**Response:** PJM evaluated the current and complete configuration of the Project: 6 x 3.45 megawatt ("MW") turbines with total capacity of 20.7 MW. This can be seen on the Single Line Diagram on page 7 of the System Impact Study ("SIS") and throughout the Dynamic Simulation Analysis (SIS, Attachment 2, beginning on page 8). The PJM interconnection queue position Z1-035 is for only 18 MW of that 20.7 MW total capacity, because 63.6% of the output of the Project is being sold to Cleveland Public Power and considered "Behind-the-Meter-Generation." Therefore, only 36.4% of the output, or 7.5 MW, will be available for the PJM market. Thus, the 18 MW level included in the PJM application is more than sufficient.

The initial application was submitted based on six, 3 MW Siemens turbines, or 18 MW. When we decided to change to the 3.45 MW 6 Mitsubishi Heavy Industries Vestas Offshore Wind ("MVOW") turbines, we chose not to apply for an additional 2.7 MW of interconnect rights because it was not needed due to the fact that 63.6% of our output was sold as "Behind-the-Meter-Generation."

The figures in the SIS are consistent with those in the OPSB application. There are no implications from an operational perspective.

Respectfully submitted,

/s/ Christine M.T. Pirik  
Christine M.T. Pirik  
Terrence O'Donnell  
William Vorys  
DICKINSON WRIGHT PLLC  
150 E. Gay St., 24<sup>th</sup> Floor  
Columbus, Ohio 43215  
Telephone: (614) 591-5461  
[cpirik@dickinsonwright.com](mailto:cpirik@dickinsonwright.com)  
[todonnell@dickinsonwright.com](mailto:todonnell@dickinsonwright.com)  
[wvorys@dickinsonwright.com](mailto:wvorys@dickinsonwright.com)

***Attorneys for Applicant Icebreaker Windpower, Inc.***

### **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 7<sup>th</sup> day of November, 2017.

/s/ Christine M.T. Pirik

Christine M.T. Pirik (0029759)

Counsel:

[john.jones@ohioattorneygeneral.gov](mailto:john.jones@ohioattorneygeneral.gov)  
[thomas.lindgren@ohioattorneygeneral.gov](mailto:thomas.lindgren@ohioattorneygeneral.gov)  
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[nicholas.walstra@puco.ohio.gov](mailto:nicholas.walstra@puco.ohio.gov)

COLUMBUS 63172-1 77326v2

# Icebreaker Windpower Inc.

January 24, 2016

## SERVICE BY FIRST CLASS MAIL

Thomas F. Zenty III, CEO  
University Hospitals Management Service Center  
3605 Warrensville Center Road  
Floor 2, Office # 1027  
Shaker Heights, OH 44122

Re: Icebreaker Wind Offshore Wind Project in Lake Erie

Dear Mr. Zenty:

Icebreaker Windpower Inc. is planning to construct Icebreaker Wind (the project) at the end of 2018. Icebreaker Wind is a 20.7 megawatt demonstration offshore wind farm, consisting of six wind turbines, located 8-10 miles from Cleveland in Lake Erie. We will soon be submitting our application to the Ohio Power Siting Board for a Certificate of Environmental Compatibility & Public Need for the project.

Pursuant to OAC Rule 4906-4-07(E)(1) (Aviation Facilities List and Map) we are required to notify aviation facilities, and entities with such facilities, that are within 5 miles of any project component. While the wind turbines for the project are located 8 to 10 miles offshore in Lake Erie, we will be constructing a small new substation within the existing Cleveland Public Power (CPP) Substation at 5251 North Marginal Road, Cleveland, Ohio 44114 (Latitude: 41.52778, Longitude: -81.64944). Because your landing strip and/or helipad is within 5 miles of the CPP substation (and thus our facility), we are providing you this notice. All components of the new facility associated with our project will be at a lower height than the existing substation structures, and therefore will not increase interference with your aviation activities.

Prior to construction, you will receive another notice detailing the construction schedule and informing you of any other relevant information.

If you have any questions or comments, please do not hesitate to contact me.

Sincerely,



Lorry Wagner, Ph.D.  
President

# Icebreaker Windpower Inc.

January 23, 2016

## SERVICE BY FIRST CLASS MAIL

Bryan Bly, Lead Pilot  
The MetroHealth Life Flight  
2500 MetroHealth Drive  
4<sup>th</sup> Floor, Life Flight  
Cleveland, OH 44109

Re: Icebreaker Wind Offshore Wind Project in Lake Erie

Dear Mr. Bly:

Icebreaker Windpower Inc. is planning to construct Icebreaker Wind (the project) at the end of 2018. Icebreaker Wind is a 20.7 megawatt demonstration offshore wind farm, consisting of six wind turbines, located 8-10 miles from Cleveland in Lake Erie. We will soon be submitting our application to the Ohio Power Siting Board for a Certificate of Environmental Compatibility & Public Need for the project.

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If you have any questions or comments, please do not hesitate to contact me.

Sincerely,



Lorry Wagner, Ph.D.  
President



# Icebreaker Windpower Inc.

January 23, 2016

## **SERVICE BY FIRST CLASS MAIL**

Brad Galvan, MBA  
The MetroHealth System  
2500 MetroHealth Drive  
Marketing Office  
Cleveland, OH 44109

Re: Icebreaker Wind Offshore Wind Project in Lake Erie

Dear Mr. Galvan:

Icebreaker Windpower Inc. is planning to construct Icebreaker Wind (the project) at the end of 2018. Icebreaker Wind is a 20.7 megawatt demonstration offshore wind farm, consisting of six wind turbines, located 8-10 miles from Cleveland in Lake Erie. We will soon be submitting our application to the Ohio Power Siting Board for a Certificate of Environmental Compatibility & Public Need for the project.

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If you have any questions or comments, please do not hesitate to contact me.

Sincerely,



Lorry Wagner, Ph.D.  
President

# Icebreaker Windpower Inc.

January 23, 2016

## SERVICE BY FIRST CLASS MAIL

David F. Perse, M.D.  
President & CEO  
St. Vincent Charity Medical Center  
2351 East 22<sup>nd</sup> Street  
Cleveland, OH 44115

Re: Icebreaker Wind Offshore Wind Project in Lake Erie

Dear Dr. Perse:

Icebreaker Windpower Inc. is planning to construct Icebreaker Wind (the project) at the end of 2018. Icebreaker Wind is a 20.7 megawatt demonstration offshore wind farm, consisting of six wind turbines, located 8-10 miles from Cleveland in Lake Erie. We will soon be submitting our application to the Ohio Power Siting Board for a Certificate of Environmental Compatibility & Public Need for the project.

Pursuant to OAC Rule 4906-4-07(E)(1) (Aviation Facilities List and Map) we are required to notify aviation facilities, and entities with such facilities, that are within 5 miles of any project component. While the wind turbines for the project are located 8 to 10 miles offshore in Lake Erie, we will be constructing a small new substation within the existing Cleveland Public Power (CPP) Substation at 5251 North Marginal Road, Cleveland, Ohio 44114 (Latitude: 41.52778, Longitude: -81.64944). Because your landing strip and/or helipad is within 5 miles of the CPP substation (and thus our facility), we are providing you this notice. All components of the new facility associated with our project will be at a lower height than the existing substation structures, and therefore will not increase interference with your aviation activities.

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If you have any questions or comments, please do not hesitate to contact me.

Sincerely,



Lorry Wagner, Ph.D.  
President

# Icebreaker Windpower Inc.

January 23, 2016

## SERVICE BY FIRST CLASS MAIL

Cleveland Police Department 4<sup>th</sup> District Station  
Attn: Commander Brandon Kutz  
9333 Kinsman Road  
Cleveland, OH 44104

Re: Icebreaker Wind Offshore Wind Project in Lake Erie

Dear Commander Kutz:

Icebreaker Windpower Inc. is planning to construct Icebreaker Wind (the project) at the end of 2018. Icebreaker Wind is a 20.7 megawatt demonstration offshore wind farm, consisting of six wind turbines, located 8-10 miles from Cleveland in Lake Erie. We will soon be submitting our application to the Ohio Power Siting Board for a Certificate of Environmental Compatibility & Public Need for the project.

Pursuant to OAC Rule 4906-4-07(E)(1) (Aviation Facilities List and Map) we are required to notify aviation facilities, and entities with such facilities, that are within 5 miles of any project component. While the wind turbines for the project are located 8 to 10 miles offshore in Lake Erie, we will be constructing a small new substation within the existing Cleveland Public Power (CPP) Substation at 5251 North Marginal Road, Cleveland, Ohio 44114 (Latitude: 41.52778, Longitude: -81.64944). Because your landing strip and/or helipad is within 5 miles of the CPP substation (and thus our facility), we are providing you this notice. All components of the new facility associated with our project will be at a lower height than the existing substation structures, and therefore will not increase interference with your aviation activities.

Prior to construction, you will receive another notice detailing the construction schedule and informing you of any other relevant information.

If you have any questions or comments, please do not hesitate to contact me.

Sincerely,



Lorry Wagner, Ph.D.  
President

# Icebreaker Windpower Inc.

January 23, 2016

## SERVICE BY FIRST CLASS MAIL

PHI Air Medical LLC  
Attn: OCC  
2800 North 44<sup>th</sup> Street  
Suite 800  
Phoenix, AZ 85008

Re: Icebreaker Wind Offshore Wind Project in Lake Erie

Dear Sir or Madam:

Icebreaker Windpower Inc. is planning to construct Icebreaker Wind (the project) at the end of 2018. Icebreaker Wind is a 20.7 megawatt demonstration offshore wind farm, consisting of six wind turbines, located 8-10 miles from Cleveland in Lake Erie. We will soon be submitting our application to the Ohio Power Siting Board for a Certificate of Environmental Compatibility & Public Need for the project.

Pursuant to OAC Rule 4906-4-07(E)(1) (Aviation Facilities List and Map) we are required to notify aviation facilities, and entities with such facilities, that are within 5 miles of any project component. While the wind turbines for the project are located 8 to 10 miles offshore in Lake Erie, we will be constructing a small new substation within the existing Cleveland Public Power (CPP) Substation at 5251 North Marginal Road, Cleveland, Ohio 44114 (Latitude: 41.52778, Longitude: - 81.64944). Because the Cleveland Clinic's landing strip and/or helipad is within 5 miles of the CPP substation (and thus our facility), we are providing you this notice. All components of the new facility associated with our project will be at a lower height than the existing substation structures, and therefore will not increase interference with your aviation activities.

Prior to construction, you will receive another notice detailing the construction schedule and informing you of any other relevant information.

If you have any questions or comments, please do not hesitate to contact me.

Sincerely,



Lorry Wagner, Ph.D.  
President

# Icebreaker Windpower Inc.

January 23, 2016

## SERVICE BY FIRST CLASS MAIL

Eileen Sheil  
Executive Director, Corporate Communications  
Cleveland Clinic  
9500 Euclid Ave.  
Mailcode: NA 4  
Cleveland, OH 44195

Re: Icebreaker Wind Offshore Wind Project in Lake Erie

Dear Ms. Sheil:

Icebreaker Windpower Inc. is planning to construct Icebreaker Wind (the project) at the end of 2018. Icebreaker Wind is a 20.7 megawatt demonstration offshore wind farm, consisting of six wind turbines, located 8-10 miles from Cleveland in Lake Erie. We will soon be submitting our application to the Ohio Power Siting Board for a Certificate of Environmental Compatibility & Public Need for the project.

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If you have any questions or comments, please do not hesitate to contact me.

Sincerely,



Lorry Wagner, Ph.D.  
President

# Icebreaker Windpower Inc.

January 23, 2016

## SERVICE BY FIRST CLASS MAIL

Khalid Bahhur, Commissioner  
Burke Lakefront Airport  
1501 North Marginal Road  
Cleveland, OH 44114-3738

Re: Icebreaker Wind Offshore Wind Project in Lake Erie

Commissioner Bahhur:

Icebreaker Windpower Inc. is planning to construct Icebreaker Wind (the project) at the end of 2018. Icebreaker Wind is a 20.7 megawatt demonstration offshore wind farm, consisting of six wind turbines, located 8-10 miles from Cleveland in Lake Erie. We will soon be submitting our application to the Ohio Power Siting Board for a Certificate of Environmental Compatibility & Public Need for the project.

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Prior to construction, you will receive another notice detailing the construction schedule and informing you of any other relevant information.

If you have any questions or comments, please do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink that reads "Lorry Wagner". The signature is fluid and cursive, with the first name "Lorry" and last name "Wagner" clearly distinguishable.

Lorry Wagner, Ph.D.  
President

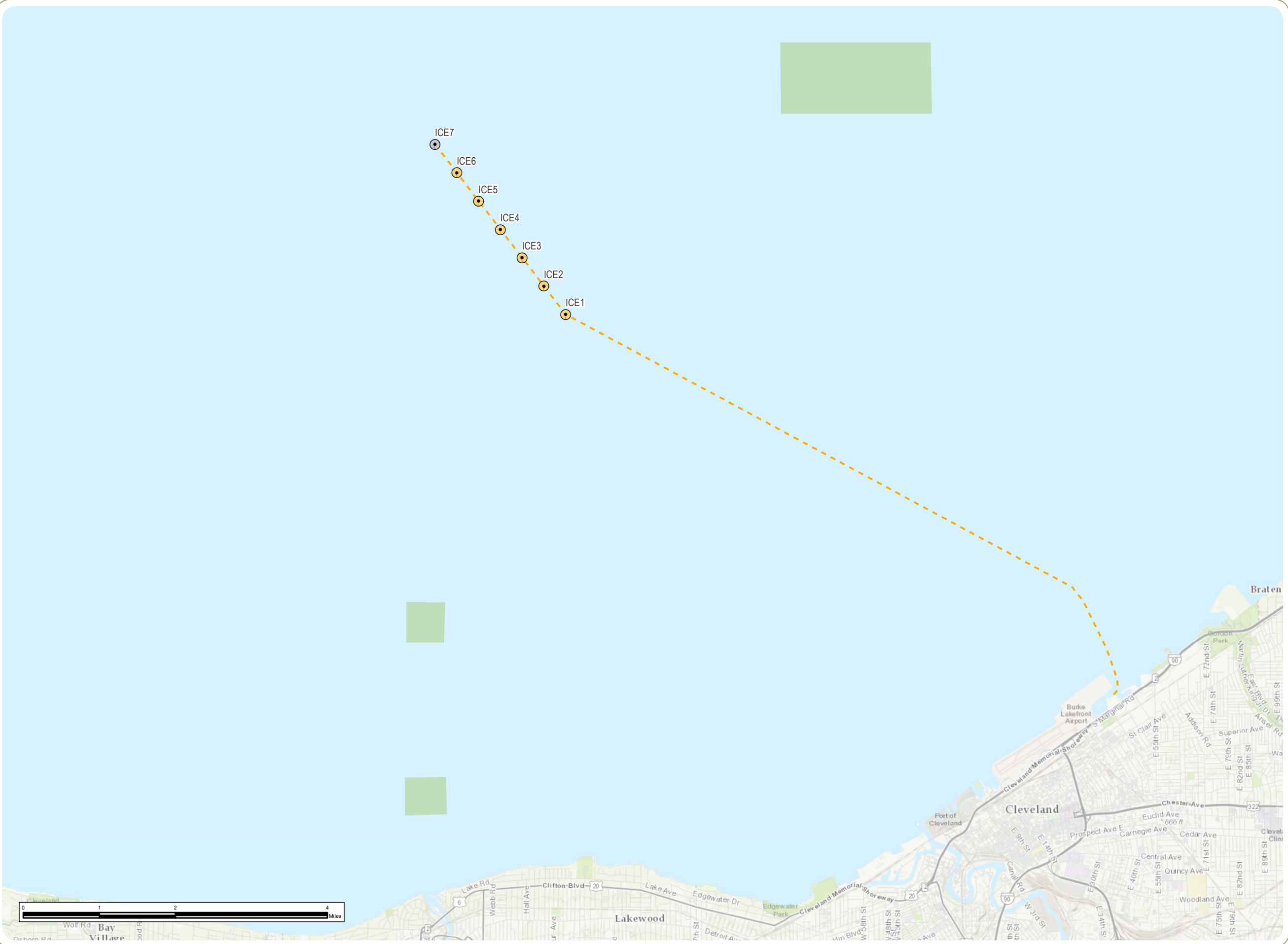
Project Icebreaker

Lake Erie, City of Cleveland,  
Cuyahoga County, Ohio

USACE Open Lake  
Placement Sites

- Primary Turbine
- Alternate Turbine
- Cable Route
- USACE Open Lake Placement Site

- Notes:
- 1. Basemap: ESRI ArcGIS Online "World Imagery" map service.
  - 2. This map was generated in ArcMap on October 10, 2017.
  - 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.



**This foregoing document was electronically filed with the Public Utilities**

**Commission of Ohio Docketing Information System on**

**11/7/2017 11:31:27 AM**

**in**

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

Summary: Response to the Third Set of Interrogatories from the Staff of the OPSB electronically filed by Christine M.T. Pirik on behalf of Icebreaker Windpower Inc.