

From: [Butler, Matthew](#)
To: [Puco Docketing](#)
Subject: Comment for 16-1871
Date: Friday, July 12, 2019 8:23:32 AM
Attachments: [Icebreaker OPSB July 2019 final comments.docx](#)

From: Alan Isselhard <speedway2742@gmail.com>
Sent: Thursday, July 11, 2019 10:27:57 PM
To: Butler, Matthew
Subject: Icebreaker final comments

Hello Mr. Butler,

Attached are my final Icebreaker comments.

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Al Isselhard
Wolcott, New York
Great Lakes Wind Truth



July 11, 2019

The Ohio Power Siting Board
180 East Broad Street
Columbus, Ohio 43215

Re: Docket Number 16-1871-EL-BGN, Icebreaker Windpower, Inc.
ATTN: Mr. Matt Butler

Dear Mr. Butler and OPSB Staff,

I am contacting OPSB with regard to the offshore wind project being planned for Lake Erie called the "Icebreaker". The project, about 8 miles northwest of Cleveland in Cuyahoga County in Lake Erie, has been in process for years. The original company proposing the Icebreaker project has been Lake Erie Energy Development Corp. (LEEDCo) and they have identified this endeavor as a six-turbine "demonstration project" or "pilot project" to produce electrical energy. The current owner of this project is Icebreaker Windpower, Inc. As of this writing there is no web site for Icebreaker Windpower Inc. Why is this? Is this a shell company?

This bold statement is found today on LEEDCo's web site:

[Lake Erie Energy Development Corporation is a public-private nonprofit partnership devoted to catalyzing the offshore wind industry in the Great Lakes Region.](#)

Apparently industrialization of Lake Erie is no longer the goal - now it's actually the Great Lakes.

I'm writing to ask that the OPSB ultimately reject this project, help end any further DOE grant money being contributed to this private for-profit Icebreaker project and prevent any turbines from being located within Ohio's

Lake Erie or any other Great Lake for the many reasons already brought to the attention of the OPSB, DOE and other involved agencies.

A draft Environmental Assessment DOE/EA-2045 has been issued by DOE and page iii says: "*The proposed project would consist of six wind turbine generators erected on foundations constructed on the Lake Erie lakebed*". This is not quite true as the turbine foundations are merely resting or sitting on the lake bottom and not constructed or secured fast in any way to the lakebed.

The draft EA page 2-4 says: "*Preliminary analysis indicates that the turbines would operate for approximately 8,200 hours annually, and have an approximate capacity factor of 41.4 percent*". The 8,200 hours annually figure must be incorrect as there are only 8760 hours in a year! I believe the capacity factor given is also a dream and inaccurate and I know of no wind factory anywhere producing that capacity factor.

LEEDCO history

The idea of an offshore wind factory in Lake Erie was first proposed by the Cleveland Foundation in 2003 according to an article on the web site Cleveland.com (Cleveland's Plain Dealer newspaper website) dated July 31, 2017 written by John Funk. Since then the Cleveland Foundation has donated money toward this project. Cuyahoga County formed the Great Lakes Energy Development Task Force (GLEDTF) to promote advanced energy in Northern Ohio for economic development and environmental improvement according to LEEDCO's website. Lake Erie Energy Development Corporation (LEEDCo, a 501c3 non-profit corp.) is created by Cuyahoga County, Lorain County, City of Cleveland, NorTech Energy Enterprise, and the Cleveland Foundation to promote regionally consistent development of offshore wind energy markets along the Northern Ohio coastline of Lake Erie according to the LEEDCO website. BTW - LEEDCo has conveniently changed their web site in early 2018 so many of the sections quoted in these comments can no longer be checked in LEEDCo's new and much, much smaller web site!

In an online article in North American Windpower dated Nov. 19, 2014, Lake Erie Energy Development Corp. (LEEDCo) announced that wind turbine installation firm Fred. Olsen Windcarrier AS (Norway based) is joining the LEEDCO development team for its Icebreaker project. A MEMORANDUM IN SUPPORT

OF MOTION FOR PROTECTIVE ORDER dated 2/1/17 notes that in 2016, LEEDCo partnered with Fred. Olsen Renewables (“FOR”) of Norway (page 5). According to a online North American Windpower article dated Feb. 2, 2017 - LEEDCo and Fred Olsen have now morphed into a new corporation called Icebreaker Windpower Inc. - a for-profit corporation and now developer, owner and operator of the Icebreaker project!

LEEDCo's President Lorry Wagner is quoted in an online article, Windpower Engineering Development, dated 7/12/17, in which he says the city of Cleveland was once the 5th largest city in the US but is now ranked 51st due to people fleeing the city for various reasons.

In 2011 LEEDCo obtained a lease option (to lease areas of the Lake Erie bottom) from the State of Ohio ODNR – (Ohio Dept. of Natural Resources) giving LEEDCo exclusive rights to the proposed site for purposes of erecting a wind factory.

In 2012, the OHIO THIRD FRONTIER, an internationally recognized Ohio technology development initiative that funds Ohio based university programs, technology companies and other organizations, voted 6-2 against funding the LEEDCo Icebreaker project, having been asked for \$5 million in support.

Ohio was one of two states that did not sign Obama's 2012 Memorandum of Understanding that would streamline the development of offshore wind resources in the Great Lakes.

LEEDCO announced in a 5/24/10 press release a "long term" partnership had just established with GE to build 4Mw direct drive turbines for the Icebreaker project (no doubt foreign made). Leedco's press release dated 8/22/13 said "*Leedco's 'icebreaker' demonstration project consists of building six, 3-megawatt, American-made turbines seven miles off the coast of downtown Cleveland in Lake Erie*" but then selected German made Siemens turbines and then abruptly switched to Denmark's Vestas V126 3.45Mw turbines. How much confidence can you have in a company that makes numerous monumental bait & switch changes like these?

An April 2013 US Army Corps of Engineers Fact Sheet said this about the Icebreaker – “*The greatest unknowns currently include potential avian/bat impacts, ice concerns, and potential acoustic impacts to aquatic species.*” The

same fact sheet says: *"The Corps has recommended that a smaller, 'pilot' project be proposed in order to study turbine impacts."*

In the summer of 2013, the Cleveland Plain Dealer newspaper conducted a poll asking reader's this question online – *Are you willing to pay more for wind-generated electricity?* Here's the results of the poll – 28% said YES while 56% said NO and 17% said it depended on price. These results, 2:1 against, are hardly supportive for offshore wind energy in the Cleveland area.

Published in Cleveland Scene on August 20, 2013:

Here's the pro-con dichotomy at work: A 2010 report from the National Renewable Energy Laboratory says that Lake Erie could accommodate enough turbines to power about one-third of Ohio's more than 5 million homes. To get there, however, the lake would be pockmarked with more than 11,000 of the biggest wind turbines ever made (each of which ascending to nearly the height of the Huntington Bank Building downtown). Given rotor span and overall height, that would take up about half of the lake's entire area.

FORBES (magazine) - These comments were quoted from LEEDCo's Lorry Wagner in an article by Forbes Rebecca O. Bagley dated 12/17/12 on www.forbes.com/sites/rebeccabagley/2012/12/17/icebreaker Wagner is quoted as saying: *"Icebreaker project alone will generate approximately 500 jobs over the next several years, 10 percent of which will become permanent maintenance, planning, administrative positions. With this project as a catalyst, the offshore wind industry in Lake Erie could generate 8,000 jobs over the next 20 years, leading to 5,000MW of offshore wind energy in the lake by 2030."*

When enough Ohioans, especially Lake Erie riparians, observe their quality of life and public trust assaulted by the Icebreaker, wind zealots, conflicted public officials and voodoo economics – the matter will eventually reach court review, hold up the Icebreaker project and hopefully the federal courts will defeat any/all Great Lakes offshore wind factories in the future once and for all.

CFACT (Committee For A Constructive Tomorrow) made the following Icebreaker comments (in part) to the Dept. of Energy in a Oct. 20, 2016 letter to DOE's Roak Parker:

"Having reviewed these proposals and the impacts from other wind energy developments in the USA and elsewhere, CFACT is convinced that the Lake Erie project and its successors will adversely affect wildlife and wildlife habitats that we, our members and supporters, our families, and the people we represent hold dear. We also conclude that the expensive, subsidized, intermittent, unreliable and uncontrollably variable electricity generated by these turbines will adversely impact the budgets, jobs, living standards, health and welfare of these people and other Americans, especially poor, minority and working class families. Nothing we have seen thus far persuades us that the Lake Erie Energy Development Company (LEEDCo) has taken, or will be able to take, steps that are necessary to protect the sensitive lake, wetland and onshore environments and wildlife in Lake Erie, especially as the project expands. Those areas include nesting sites, foraging areas, migration routes and other ecological spaces on which numerous bird and bat species depend – including eagles and other raptors, wading birds, geese, swans, ducks, song birds, silverhaired and other bats, and other valuable, rare, threatened and endangered species."

LEEDCO's president has been Lorry Wagner since it formed - now he's also President of Icebreaker Windpower Inc. and in 2010 he was on the Ohio Power Siting Board. Lorry Wagner is quoted in a Hi Velocity website article dated May 19, 2011 written by Patrick Mahoney saying: *"We hope to be in the water or to have the project operating by the end of 2013"* Same article Wagner says: *".... our target is to get a thousand megawatts in the water by 2020"*. Same article Wagner says: *"Our economic study, which was commissioned by Nortech, looked at having 5,000 megawatts in Ohio's waters by 2030"*. (Now do the math - 5,000 divided by 3.4Mw/turbine=1470 turbines in the lake.) But without doubt the public needs to take a look at income tax Form 990 for calendar year 2015 that had questions to answer by LEEDCo President Lorry Wagner. One important question was:

1. *Briefly describe the organization's mission or most significant activities*

Wagner's response was:

"CREATE ROBUST OFFSHORE WIND ENERGY INDUSTRY IN NORTHEAST OHIO"

A 6-turbine offshore demonstration project such as the Icebreaker does not represent a wind energy industry in northeast Ohio. Wagner's written response is actually indicating a massive offshore wind energy program(s) that will eventually plant a forest of 500'+ tall industrial machines in Lake Erie Ohio for the rest of our lives. Lake Erie will face ruination forever with turbines destroying the unique

vista of an unbroken horizon. Thousands of birds and bats will be killed annually. Drinking water for millions will be contaminated forever. Five or 6 nuclear plants are capable of producing as much electric as Wagner's dream and the nuclear plants will operate continuously 24/7 overcoming wind's overwhelming intermittency - the freshwater in Lake Erie won't get contaminated and avian life won't be affected.

The draft EA page 1-2 says:

By providing funding, technical assistance, and government coordination to accelerate deployment of these demonstration projects, DOE can help eliminate uncertainties, mitigate risks, and support the private sector in creating a robust U.S. Offshore Wind Energy Industry. This is no longer a private not-for profit project as Leedco, in serious financial trouble, sold their assets out to Fred Olsen Renewables and a new company was formed called ***Icebreaker Windpower Inc.*** that is now a **for-profit** company and its this company that has applied to the OPSB for a certificate to construct a wind-powered electric generation facility in Cuyahoga County, Ohio - a Certificate of Environmental Compatibility and Public Need - in Lake Erie.

In a 2/1/17 a letter from Icebreaker Windpower Inc. attorney Christine Pirik requesting several sections of their Case # 16-1871-EL-BGN application be made confidential and this was granted by PUCO. (Motion For Protective Order and Memorandum in Support) This is another indication of Icebreaker transparency - that complete transparency simply doesn't exist.

USA taxpayer money has been granted to LEEDCo in the past by the DOE which makes me a part owner of the Icebreaker project yet neither DOE nor the Ohio Power Siting Board will tell me how much Fred Olsen paid for LEEDCo's assets, exactly when the sale took place, what the assets were (that Fred Olsen bought), who the buyout was payable to, etc. even though I've requested this information from DOE and OPSB via FOIL requests. So much for the transparency LEEDCo promised. Furthermore the U.S. DOE has been unresponsive to providing financial cost reports for the project and refused to answer our FOIA requests - especially requests about LCOE. Neither DOE nor OPSB are answering our legitimate questions on the project and this raises our suspicions about both the project and government organizations. It is repulsive to think that a \$50M Advanced Technology Demonstration Projects federal grant from DOE might be simply transferred from a 501c3 not-for-profit American organization, LEEDCo, to a foreign corporation that

operates for-profit, Fred Olsen Renewables. And then these 2 corporations reinvent themselves as Icebreaker Windpower Inc. - a new corporation.

The first Icebreaker permit application to the Ohio Power Siting Board (OPSB) submitted by LEEDCo in April 2014 was rejected for 14 reasons, mostly environmental. LEEDCo has missed numerous promised deadlines over the years for when the Icebreaker project would be started and operational. Currently LEEDCo's web site promises: *Construction planned for Summer 2020 with Operation in November 2020.*

DOE LCOE (levelized cost of energy) requirements -

The DOE issued these requirements when LEEDCo applied for a \$40M+ DOE Advanced Technology Demonstration Project grant for the Icebreaker project. Here are the DOE Advanced Technology Demonstration Projects goals:

DE-FOA-0000410: U.S. Offshore Wind: DE-FOA-0000410: U.S. Offshore Wind: Advanced Technology Demonstration Projects

The primary goals of the Advanced Technology Demonstration Projects are to:

- 1. Install innovative offshore wind systems in U.S. waters in the most rapid and responsible manner possible, and*
- 2. Expedite the development and deployment of innovative offshore wind energy systems with a credible potential for lowering the levelized cost of energy (LCOE) below 10 ¢/kWh or the local "hurdle" price at which offshore wind can compete with other regional generation sources without subsidies.*

The Icebreaker project failed in their initial attempt for the \$40M federal grant and were not chosen in the down-select process and I trust OPSB is aware of this. DOE would not, following our FOIL request, tell us why the Icebreaker failed in the down select process. Because 2 of the 3 offshore wind projects originally chosen for the grants failed and because LEEDCo was fortunate to have their Ohio district Congresswoman Marcy Kaptur push hard for them - LEEDCo was eventually awarded the \$40M grant and they have received about \$14m of the grant to date. And then listen to Ohio Congresswoman Kaptur spew the outrageous statement that "*Lake Erie is the Saudi Arabia of wind*". Of course she's not talking about Icebreaker's 6 turbines planted offshore from Cleveland but the installation of hundreds or thousands of turbines populating Lake Erie in Ohio waters to the

Canadian border mid-lake. Kaptur's thinking has been influenced by the offshore wind zealots to the point she actually believes thousands of jobs will be created should the project take off.

The LEEDCo web site (since changed) under FAQ's Energy truly tells what this pilot project is all about and here it is:

"The purpose of developing this initial offshore wind project, in spite of its above-market cost per kWh, is to plant the seeds for a new local industry that can employ thousands of people when mature. The economic benefits associated with the future industrial activity – jobs, tax base, small business creation – should far outweigh the upfront investment in the above-market cost of the power associated with early offshore wind turbine deployment." The project purpose is NOT about northern Ohio's need for electricity - as there is no need for power from 6 offshore turbines that will contribute to the decimation of avian life in this major Great Lakes flyway and produce miniscule power. I cannot find anywhere that LEEDCo indicated the Icebreaker was filling a need for electricity for either its initial 6 turbines or any of the hundreds to follow in potential additional offshore projects.

A comment from the Ohio Dept. of Natural Resources on Icebreaker Statement of Project Objectives on page 1 -

"...Project will serve as a technology innovation and validation center to reduce the levelized cost of offshore (LCOE) wind energy for the shallow waters of the Great Lakes." Reduce? Reduce from what to what? This is an interesting comment but again does not comply with stated DOE mandates on LCOE. ((LCOE) below 10 ¢/kWh)

I cannot find in the draft EA that the Icebreaker meets the LCOE requirements stated for the Advanced Technology Demonstration Projects. Comments made over the years by LEEDCo staff have always indicated that power produced by Icebreaker wind turbines will be more costly than traditional electric power and this is contrary to DOE's requirements.

Therefore the Icebreaker has failed item #2 of the primary goals listed for DOE Advanced Technology Demonstration Projects and this is significant. Because the project has failed to meet LCOE requirements mandated by DOE - the DOE should taking a position No-Action Alternative.

The LEEDCo web site once said under Economics admitting: "*Admittedly, offshore wind energy is more expensive than other conventional sources of electricity.*" - a gross understatement. Expensive offshore electricity will hurt Cleveland's poor.

I predict the Icebreaker project will fail the DOE mandated cost-benefit analysis which is needed from the state public utility commission before the OPSB can approve the project. The poor people of northern Ohio will suffer the most from high cost offshore wind energy leading to fuel poverty and the poor may have to choose between warmth and food. Despite all this talk of LCOE and Icebreaker not being able to meet DOE requirements - DOE ultimately approved the project.

LEEDCO's website (changed numerous times) once said under FAQ's - Economics : "*Leedco and its partners realize that the price of power from this initial project will be above market levels*" and he's further quoted from Cleveland.com (Cleveland's Plain Dealer newspaper online site) website piece dated 12/7/15 - LEEDCo's "*Lorry Wagner said the price of the project's power will be above market prices for the first 10 to 15 years while the company pays off the construction debt but far below market prices after that.*" Nobody will tell me what the estimated LCOE is for this project. The levelized cost of electricity (**LCOE**), also known as Levelized Energy Cost (LEC), is the net present value of the unit-cost of electricity over the lifetime of a generating asset. It is often taken as a proxy for the average price that the generating asset must receive in a market to break even over its lifetime. I've sent 2 FOIL requests to DOE for the LCOE data and they won't release the info to me even though they know the simple answer. I also suspect the OPSB knows the estimated LCOE.

No need for this project

The Icebreaker project fails one of the OPSB's eight criteria that must be met by law - *The "need" for any transmission facility*. A transmission facility is an essential part of the Icebreaker infrastructure.

The need for additional electricity from offshore wind doesn't exist because there is no need for more electricity in Cleveland, Ohio. Furthermore - in none of LEEDCo's numerous documents was there ever stated a "need" for additional electricity in Cleveland.

Icebreaker opponent Pat Hersch of Erie, Pa. commented at the Nov. 8, 2017 Cleveland Public hearing and shared this verbal comment by LEEDCo President Lorry Wagner that he made to her face-to-face at an earlier public meeting in Ohio on the Icebreaker: Hersch said: *"I did attend one of the Leedco informational meetings in Cleveland which turned out to be a question and answer session, again fraught with misinformation. When I asked Mr. Wagner about the ability of wind turbines to produce electricity when it was needed, he told me that Icebreaker was not about producing energy, it was about determining if Cleveland could become a manufacturing hub for turbine parts"*. I believe Mr. Wagner stated the absolute truth in his statement to Mrs. Hersch about creating this manufacturing business and that his statement represents the crux of this entire Icebreaker matter.

The following is found in the draft EA page 1-4 on project needs:

The project purpose, as described by LEEDCo, and defined by the USACE is as follows:

- *The construction of a freshwater offshore wind energy project, in order to demonstrate the technical feasibility of wind energy in Lake Erie; and*
- *The production of wind-powered electricity that would maximize energy production from local wind resources, in order to deliver clean, renewable electricity to the Ohio bulk power transmission system.*
- *Help reduce air pollution in an area that historically has been in non-attainment for 2.5-micron particulate matter, lead, and ozone;*

There is no need for this demonstration project in Lake Erie as there are numerous terrestrial wind projects now ongoing or planned in Ohio. The OPSB has approved numerous terrestrial wind projects. Wind energy in Lake Erie is poor. Here are two major problems with the proposed project: (1) There is NO proof that offshore turbines can withstand winter ice conditions normally found in the lake and (2) the mono bucket foundation design is not securely fastened to the lake bottom hence the turbines may topple over long before end of life. Adequate qualitative testing on the ability for offshore turbines to withstand ice laden freshwater in Lake Erie was never done nor were mono bucket foundations attempted anywhere in the world in freshwater. Wind energy is not clean as mentioned in the second part of the draft EA because without doubt fossil fuel backup power is needed 100% of the time for wind and the backup power is needed from Ohio's coal fueled energy plants. The second EA comment mentioned wind generated renewable electricity which is not reliable, despatchable and is intermittent with poor quality electric results. Backup power generated by coal fuel will overpower any reduction in the turbines reduction of air pollution and continue to emit micron sized particulate matter, lead and ozone at the same time wind is generating electric. Wind power

will not insure clean electricity due to fossil fuel needed backup 100% of the time and continue to produce particulate matter. Coal fueled electric plants were not designed to be ramped up and down to accommodate for wind turbine output and this required ramping contributes to additional coal generated pollution as a result of wind turbines.

The ITC Lake Erie Connector -

The ITC Lake Erie Connector is a 1,000 MW, bi-directional, high-voltage direct current (HVDC) underwater transmission line that will provide the first direct link between Ontario and the largest electrical market in the world – 13 U.S. Midwestern and Mid-Atlantic states. The project will connect the Ontario Independent Electricity System Operator (IESO) and the U.S. PJM Interconnection (PJM) regional transmission organizations serving these markets.

Benefits: This project will help deliver more affordable, cost-effective electricity to customers as a result of increased energy trading between these power markets. Each region will have enhanced optionality to manage their energy needs and policy goals and respond to shifting supply/demand conditions, outages, and system planning requirements. The project also will help improve the reliability and security of the respective energy grids. These benefits can be realized through maximized use of existing assets and without taxpayer subsidies.

Developer: This project is being developed by ITC Holdings Corp., the largest independent electricity transmission company in the United States and a subsidiary of Canada-based Fortis Inc., a leader in the North American regulated electric and gas utility industry. ITC acquired the rights to develop the Lake Erie Connector project from Lake Erie Power Corp. in June 2014.

Project Status: The Lake Erie Connector project is fully permitted in Canada and the United States. Remaining key milestones include completing project cost refinements and securing favorable transmission service agreements with prospective counterparties. Upon completion of these steps, we expect to begin construction in 2020, complete construction in 2022, and enter commercial operation in 2023.

Now compare all the benefits of the ITC connector vs Icebreaker's offshore wind - which project would you choose?

Lake Erie Power Corp's (LEPC, Canada) electrical transmission line (Lake Erie Connector Project) consisting of two cables under Lake Erie from Nanticoke, Ontario, Canada to near Erie, Pennsylvania and I assume USACE is aware of this. The draft EA, Appendix E, page 43 gives some details of this cable energy project. The answer is Ohio should be bringing more power to Cleveland via another connector cable project from Canada instead of raping Lake Erie with turbines that may last only 10 to 15 years. A transmission cable connector line would be far more productive, a better alternative than offshore wind, offer a better cost benefit ratio, and outlive the offshore turbines and produce 50 times more electric power than the Icebreaker. With a power project like the ITC - who needs the Icebreaker?

USACE said in a published 2013 USACE fact sheet referring to the Icebreaker :
"The Corp has recommended that a smaller pilot project be proposed in order to study turbine impacts."

LEEDCo and Icebreaker Windpower Inc. has been preaching for years the Icebreaker project could be built for \$126M. The Icebreaker project will face the same doom and conclusion as New York's Great Lakes Offshore Wind (GLOW) project did a few years ago – *it was too costly to pursue*. On June 25, 2010, at a New York State Power Authority meeting at the Woodlawn Beach Conference Center, the Authority clearly stated the cost for electricity with the offshore wind turbines would be around 19 cents per KWH. Connie M. Cullen, a spokesperson for the NY Power Authority, said that NYPA decided *"not to proceed with plans for an offshore wind farm in the Great Lakes"* because an *"evaluation of the proposed project's economics determined that it would not be fiscally prudent for the Power Authority to commit to the initiative at that time."* How could the situation be any different today for Icebreaker Windpower Inc. and the Icebreaker? Will history repeat itself? The NYPA squandered millions of ratepayer's dollars on promoting GLOW's historic failure and so will Icebreaker Windpower Inc. and LEEDCo. Even if the OPSB approves the project - Icebreaker Windpower Inc. will not have the funding to finish the project because the grant funding from DOE is being held up. The project has morphed from a not-for-profit to a for-profit owned by a foreigner. Possible future legal problems will also doom the project.

SEISMICITY AND SEISMIC ACTIVITY

The draft EA Appendix F2, page 5 - revealed this information on seismicity in Lake Erie:

Earthquakes of moderate to low intensity have been reported near the project area. According to the USGS seismicity map, the suburbs of East Cleveland, Euclid, and Willoughby experience above average seismic activity. Although most seismic activity in that area is less than magnitude (M) 4, seismic events greater than 4 have been recorded. The USGS seismic hazard map indicates the peak ground acceleration (PGA) associated with a 2 percent probability of occurrence over a 50-year period is between 0.10 to 0.14g. The largest, recorded seismic event occurring below the Lake Erie region occurred in January 1986. The epicenter of that event was about 17 km south of the Perry nuclear power plant in Lake County

(Nicholson et al 1988). The earthquake was felt in 11 states and generated short-duration, relatively high accelerations of about 0.18g. Learning this information makes one wonder how the turbines will remain vertical within .5 degree verticality. I wonder if USACE gave seismicity serious consideration before making their approval decision in this matter.

Icebreaker is NOT a merely six-turbine demonstration project

The EPA web site says this about Lake Erie:

About one-third of the total population of the Great Lakes basin is in the Lake Erie watershed. Approximately twelve million people live in the watershed, including seventeen metropolitan areas with more than 50,000 residents. The lake provides drinking water for about eleven million of these inhabitants.

The reality is that this is not a six-turbine project but simply a means for a "make work" project for Ohio's languishing employment situation and this is what Icebreaker Windpower Inc. President Lorry Wagner has said. LEEDCo staff has convinced northern Ohio politicians that by building turbines for offshore use that their bleak employment picture will immediately improve and create good paying jobs will develop. LEEDCo has failed to understand what's happened recently in Europe and Asia where wind power is now realized to lead to energy poverty and now more coal plants are being planned while less wind energy is being sought and developed. The bleak reality is that by DOE, OPSB or USACE approving the six turbines for the Icebreaker project they are also opening the door to massive turbine infiltration in Lake Erie that will industrialize the lake for the rest of our lives. Lake Erie is a major migratory route for avian life as it has been since day one. Bats and birds will be slaughtered and their carcasses conveniently swept away by the lake currents so that nobody really knows how many of these creatures were sliced and diced by offshore turbines. North America Migratory Flyway protection legislation i.e. the Migratory Bird Treaty Act (MBTA) is designed to ensure that governments do indeed protect such migratory paths and I question that DOE, OPSB and USACE is recognizing this and hopefully the project will be legally challenged in the future should the Icebreaker be approved by all required agencies.

Icebreaker Windpower Inc. President Lorry Wagner and LEEDCo's VP David Karpinski and other LEEDCo staff have for years been promising a future consisting of up to 5,000 Mw of offshore power by 2030 and even 1500 by 2020

that will now not be met. Of late LEEDCo hasn't mentioned this additional goal as it may deter OPSB approval. For the OPSB to approve the Icebreaker 21 MW project is virtually opening the door to unlimited wind offshore turbines being installed in Lake Erie in the near future creating an industrial zone forever - probably owned and operated by foreigners. An unthinkable precedent will be set allowing turbines in Lake Erie waters. Think of how many Vestas V126 3.45MW turbines installed are required to produce 1,000 Mw of power. The math indicates 390 turbines are needed to produce 1,000 MW of power. Can anyone imagine what Lake Erie would look like with 390 turbines on the USA side of the lake? Then add whatever Ontario decides to permit in Canadian waters (another 390?) if they end their moratorium and you have the complete industrialization of this valuable natural Lake Erie resource forever. And you can almost certainly predict that foreign developers will be the ones to design, install, own and operate these horrible projects as there are currently NO USA manufactured industrial turbines. Can the DOE, ODNR, OPSB and USACE allow this defacing of Lake Erie? I truly believe President Trump will ultimately put a stop to this project before the first turbine is ever placed in the water and we will be encouraging him to take whatever steps are necessary to end any project that industrializes our precious Great Lakes.

From the Cleveland.com web site dated 2/2/17 is this information from Fred Olsen Renewables - "*Fred. Olsen Renewables, USA, a subsidiary of Oslo, Norway-based Fred. Olsen Renewables, hopes eventually to build hundreds of turbines in the lake*", said Fred Olsen Renewables CEO David Brunt."

Whatever decisions are made to allow this Icebreaker offshore wind project should be made with the thought that hundreds of turbines will infiltrate the lake - not 6.

Ohio's drinking water from Lake Erie is now threatened.

The threat of which I speak is contaminated Lake Erie drinking water as a direct result of the placing of offshore wind turbines in Lake Erie beginning with the Lake Erie Energy Development Corporation (LEEDCo) Icebreaker project.

Per the Icebreaker Windpower Inc. public informational meeting on Nov. 3, 2016 in Lakewood, Ohio - slide #6 says this: *Mercury emitted into the air from coal-fired power plants is by far the leading man-made source of mercury in the Great Lakes and the rivers and streams of the region.* What Icebreaker Windpower isn't

admitting is that wind turbines need continuous backup and that usually means fossil fuel powered electric plants and continued mercury spewing pollution. The pollution situation may be even worse as the fossil fueled plants were not designed to be ramped up and down.

Ohio Sen. Rob Portman participated in bipartisan reforms in the Water Resources Development Act to protect drinking water and was quoted Dec 5, 2016:

"We must protect Lake Erie and ensure access to clean drinking water around the country, and this bill makes important progress on both goals," said Portman. "I'm glad my bipartisan initiatives were included in the final package that was announced today. I look forward to the Senate passing this important legislation and the President signing it into law as quickly as possible so we can protect our Great Lakes and ensure that every American has access to clean water."

I agree with Sen. Portman and I wonder if the OPSB, DOE and USACE agrees that the offshore turbines threaten one of the greatest sources of drinking water in Ohio and is now under a very serious threat from the Icebreaker project. Yet Sen. Portman has betrayed the people of Ohio by ultimately standing in favor of the Icebreaker offshore wind project.

When the turbine mono bucket foundations are placed in the water there will be a major mercury sediment displacement that has been downplayed by Icebreaker's cherry picked engineers.

There will be a need to pump out the mercury laden bottom lands area under each turbine mono bucket foundation plus the sediment disturbance of the lake bottom with burying turbine to turbine inter-array electrical cables, via jet plow, plus the routing of the electrical cables to shore under the lake bottom via jet plowing. This is the procedure already filed with the OPSB and USACE in LEEDCo application documents and could contribute to contaminated drinking water. Even worse than a jet plow is mass flow excavation which is also being considered for cable laying and burial according to the draft EA Appendix D, pages 19, 20. And the mono bucket foundation is equipped with water jets that supposedly help level the foundation - the use of the foundation water jets will also cause sediment disturbances. Add to this polluter mix the certain lake bottom ice scouring that will disturb the electrical cables buried in the lake bottom and adding more mercury pollution, and other toxins, to the drinking water.

The USACE Engineer's Permit Application for Icebreaker dated August 2017 says this about sediment displacement on page 18:

Installation of the MB foundations would not require vegetation removal, dredging or drilling prior to, or during, the installation process. Installation of the six foundations will directly disturb approximately 0.34 acre of substrate habitat for the turbine foundation. There also is potential for localized, short-term impacts as a result of water withdrawal from inside the foundations and discharge of this water to the lake.

During the installation process, approximately 810,000 gallons of water would be extracted from inside the foundation bucket and released back into the lake. Sediment from the top 0.1 to 0.3 meter (0.3 to 1.0 foot) of the lakebed could be sucked into the pump and mixed with the discharge water during the last approximately 1 meter (3 feet) of the penetration process. The water and the vast majority of suspended sediment removed during the MB installation would be pumped from the inside of the bucket back on to the lid of the MB. The quantity of sediment that would be pumped out may vary by location and the particular composition of the sediment at each of the six turbine sites. Finer grained sediments would become more easily entrained in the discharge water when compared to coarser grained sediments. The amount of sediment that could potentially become entrained in the discharge water and released from the exhaust port is anticipated to be up to 75 cubic meters (98 cubic yards). The vast majority of the sediment would be returned to the lakebed on top of the MB lid, with a small amount possibly falling to the lakebed beyond the diameter of the lid (Inset 1). This fallback of sediment onto the lid would reconstitute portions of the benthic habitat that would be lost due to the installation of the MB.

Page 20 of the applications says this:

Water current data collected by LimnoTech, shown in Inset 6, shows that water currents could carry sediments in the direction of the intakes, and surficial sediment data from Canadian Seabed Research show areas of fine grained sediment are located along the cable route in the region near the intakes.

Be wary of what's been described above and think of this process being repeated hundreds (or thousands) of times for the numerous future offshore wind projects that will be slated for shallow Lake Erie. I believe the amount of sediment sucked from the lake bed during pumping 810,000 gallons of water from inside the mono bucket foundation during placement is grossly understated and will contaminate drinking water making it unsafe for the general public.

Beware OPSB, DOE & USACE staff - Lake Erie drinking water is destined to become polluted soon just like Toledo, Ohio and Flint, Michigan drinking water. Polluting the drinking water will be accomplished by churning up the toxin mercury laden lake bed when placing offshore turbine mono bucket foundations, churning the lake bed up again with jet plows (or mass flow excavation) for the turbine to turbine cables, churning up yet again for the turbine to shore cables and

churning things up again when the turbines are decommissioned, useless and need removal. LEEDCo readily admits sediment can be disturbed during construction but that's an understatement. The contaminants that have lain dormant at the lake bottom for decades, especially toxic heavy metals, will eventually be sucked into the water crib north of Cleveland and into the city's water system. But this isn't the worst of it - the Icebreaker is merely a pilot project leading to the siting of hundreds additional turbines in the lake (by LEEDCo's own admission), USA side. Think about how many cubic yards of lake bottom noxious sediment substances will be disturbed, suspended in the water and find their way into the drinking water systems of Cleveland and other Lake Erie cities that depend on clean Lake Erie drinking water. Lake Erie has a 2.6 year retention time. Canadian drinking water will be affected too and so will Pennsylvania and New York water.

A recent US Dept. of Energy WINDEXchange Newsletter says: *"The American Wind Energy Association [reports](#) that the Ohio Power Siting Board approved permits for eight wind facilities in the state, with another three projects in the pending or pre-application stage. These wind projects would add 1,452 megawatts of clean energy...."* Obviously the Icebreaker's 21Mw of intermittent wind energy is absolutely meaningless considering the total terrestrial wind projects already considered and approved by the OPSB.

Another area of possible drinking water pollution in Lake Erie as a result of offshore turbine presence is the cleaning/washing of the offshore turbine blades with chemicals applied from a helicopter or other means. Think about 3 rotor blades per turbine as well as the noise from a helicopter cleaning these blades twice a year which is what is recommended for every turbine in a project. All the pressure cleaning/washing chemicals used to cleanse the blades as well as dead bugs, dirt, dead bird matter, etc. - will fall into the lake adding to drinking water contamination. Has this matter been brought up to anyone's attention already?

USACE's Dr. Steven Daly's report - **Characterization of the Lake Erie Ice Cover**

This report was prepared by Dr. Daly specifically for LEEDCo and released in April 2016.

Ice scours mentioned in Dr. Daly's report should raise a red flag for use of a mono bucket turbine foundation in the foundation design. Daly's report on page 50 says: *The ice scours were discovered in 13 to 25 m of water, were approximately 4.5 to 6 km long, were 60 to 100 m wide, and were gouged up to 2 m deep into the lakebed.* Daly's report also on page 50 says: *Most of the scours were detected between 17 and 21 m of water depth, with a minimum of 6.75 m and a maximum of 26.7 m; and all were detected within about 16.5 km (10 miles) of shore.*

Ice-scouring can affect and damage the electrical cables from turbine to turbine and from turbine to shore! Has this been studied?

Page 52 mentions an ice island being formed in Lake Erie, another red flag. Please read this:

The ice island was acting as a barrier to the moving ice mass with the result that a lee side slot was being cut out of the lake ice forming a large tear drop shaped open water area at the east end of the island. The island was oriented with its long axis in an eastwest direction. On the windward side of the island the flat ice sheet was moving and colliding with the island causing the ice to break and pile up into a 2–3 m high ridge. . . . The moving ice sheet was also being driven down beneath the ice ridge to help form the deep ice keel. . . . Bottom mud was observed being churned up into the water column by the action of the descending ice blocks.

Page 69 says: *There is conclusive evidence that ice ridges form in Lake Erie and that their keels can be 25 m deep or more. Most of the evidence is indirect and consists of ice scours created by the keels of ice ridges in contact with the lake bed. The large loads that ice ridges pose to wind turbine towers in Lake Erie results from the collision of a moving ice ridge and a tower. The important ridge properties are the consolidated layer thickness and the keel depth as they both strongly influence the magnitude of the load.*

Now think about how the described scours might affect the stability of the turbine mono bucket foundations and their ability to stand within +/- .5 degree verticality since the foundations are not fastened to the lake bottom and bedrock. Think about how the ice scours could impact the area of the turbine assembly where the "ice cone" is supposed to break up ice before damaging the turbine assembly. I predict shifting ice (horizontal shear) will eventually cause movement in the turbine assembly causing the assembly to eventually tip and topple into the lake. The mono bucket is a dirt cheap and risky solution to a complex problem. When the turbine assembly begins to tip and isn't corrected - I believe it won't be long before

the entire turbine assembly will topple and the tower will buckle during the process. If this all happens when the lake is completely frozen over it will be nearly impossible to dispatch jack-up barges and cranes or other vessels to rectify the situation because they will be unable to reach the turbine in trouble due to ice conditions. The Coast Guard has already informed me they will provide no ice breaking vessels. Even if an ice breaking vessel could be dispatched - there is the possibility its approach near to the turbine could cause it to tip further and crash - a foolish risk. Following the turbine crash the fluids within the nacelle will leak and contaminate the lake.

Also consider the surface area of the 3 rotor blades and the buildup of ice on the blades during a rain/ice storm in 30 degree weather. Think about the dramatic change in balance caused by ice buildup on the rotor blades that would impact the +/- .5 degree vertical spec. that would lead to an out of balance condition and tipping of the turbine assembly. Lake water could also be swept onto the 3 blades by high wind conditions leading to an imbalance. Ice on the 3 blades would increase static rotor loads. Flying ice particles striking the leading and trailing edges of the rotor blades will erode these surfaces and affect output. Rotor blade tips can reach nearly 200mph while striking the ice particles. It is said that steel and composite material used structurally will have their mechanical properties altered in low temperatures causing steel to become “more brittle”. Due to shrinkage of fiber components, composite materials are “subjected to a residual stress. Electrical equipment inside the turbines may malfunction in winter low temperatures. Snow could be blown inside the nacelles and create problems and block air supplies to critical components.

Think about the vibrations within the turbine assembly caused by waves during a storm and how they affect the vertical spec. Think about vibrations created during the rotor rotation and nacelle rotation and how these would impact vertical specs. Think about how ice scour will impact the entire turbine verticality. Think about blade passing frequencies. Think about the impact of low temperatures on the physical properties of materials. Lake Erie is well known for lightening strikes during storms and no doubt turbines will be struck. What impact will a lightning strike have on the vertical spec.? These are all hydrodynamic loads impacting alignment of the turbine assembly. Now take a look at the few places in the world that host offshore turbines and count how many wind factories use a mono bucket to support a turbine! None of them are located in fresh water.

Dr. Daly's lengthy report hardly ever mentions the Icebreaker project and never mentions the innovative mono bucket turbine foundation, never mentions the celebrated "ice cone", or if the +/- .5 degree verticality spec. can be held throughout the project life and there really is no link between his highly technical report and the Icebreaker turbine assembly. His report shows 41 years of ice chart information. Daly's report was made public AFTER the design of the mono bucket foundation that will be used in this pilot project therefore he had an opportunity to review the mono bucket foundation design. His Conclusion does not make any positive recommendations for the turbine assembly nor endorse the engineering and design for the turbine mono bucket foundations. Dr. Daly's article mentions there are several unknowns and he simply doesn't wish to put himself at risk of supporting the Icebreaker and possibly damage his professional reputation and I don't blame him. Someone should ask Dr. Daly to give a brief written report on whether he would recommend moving forward with the Icebreaker project as designed and if it is safe for the life of the project. Based on what I have read in Dr. Daly's report I would absolutely NOT recommend that the DOE squander millions more American taxpayer dollars on the Icebreaker project. The DOE was right in rejecting this demonstration project in the beginning.

Lake Erie lightening strikes will damage/brake the rotor blades and cause fires in the nacelles. Lake Erie is notorious for electrical storms. Please consider this news story (in part) from Conneaut, Ohio's www.starbeacon.com by Mark Todd, Feb. 28, 2017.

CONNEAUT – Administrators in Conneaut are assessing damage to the city's wastewater treatment plant caused by lightning that struck a wind turbine adjacent to the plant early Saturday morning.

The turbine, which supplements electricity used by the sewage plant, lost a blade when lightning hit about 1:30 a.m. Saturday. A power surge penetrated the plant and might have affected some equipment in the building, City Manager James Hockaday said Monday.

Chunks of the shattered blade were strewn across a wide area, including Marina Drive, Hockaday said.

The turbine is no stranger to bolts from the blue. In August 2011, a lightning strike damaged a blade that was replaced several months later.

The 400-kilowatt turbine, perched at the edge of Lake Erie, was constructed in January 2010 by its owner, NexGen Energy of Boulder, Colorado.

The Icebreaker mono bucket foundation design is risky at best

The draft EA states that the foundation mono bucket weighs 500-600 tons and is a cheap solution to a critical problem. Vestas turbine info says the 3.45 Mw turbine weighs 70,000 metric tons.(77,161 US tons) This scheme has never been tested in freshwater anywhere. Further - the draft EA notes that the foundation is expected to maintain .5 degrees verticality. I do not believe this is possible over time as the actions of wind, waves, ice, ice ridges, further sinking into the lake bottom mud, static ice buildup on the blades and nacelle will shift weight distribution, the rotation of the rotor and nacelle will shift weight distribution (just like the wheel of a car) - and the cumulative effect of the addition of the tower, nacelle and rotor will eventually disturb the .5 degree vertical assembly spec. and the turbines will topple into Lake Erie over time if not immediately. There will be extreme stress and vibration on the turbine ice cone that will contribute to out of spec. verticality and cause the turbine to collapse..

Draft EA Appendix Q relates to ice data and the introduction on page 1 says this:
The potential ice load from a moving ice ridge colliding with a wind turbine tower can be very significant. The towers and their foundations must be designed to resist these loads. What engineer will say that the present mono bucket foundation design and turbine assy. merely sitting on the lake bottom will withstand winter ice conditions? What individuals, by name, will attest that the mono bucket design will resist icing loads?

I can't find that any professional engineering company (or government agency) has reviewed the mono bucket design - concluding that it will function properly in freshwater prone to freezing - like Lake Erie. There's almost nothing in the draft EA about the turbine or mono bucket foundation being resistant to toppling over from ice actions. There's no solid attachment of the mono bucket to the lake bottom - its simply sitting in the mud. I wonder what the estimated toppling point might be from vertical or if this had even been studied? There will be vibrations/rotations of the rotor and nacelle may affect plumb. There may be impact of gyroscopic effects or braking torque that will upset the .5 vertical position. Lots of lake ice data given by USACE within Appendix Q but none of it

gets specific into how it may impact the cheap mono bucket foundation, turbine plumbness, etc. - this has been completely overlooked. I look at the mono bucket turbine foundation and turbine assy. as a golf ball sitting on a tee pushed into the sand. Isn't there a safety issue here? I can see these 6 turbines easily toppling over.

Is there no third party engineering group investigating these issues?

USFWS letter regarding avian issue

I wish to share in part - a letter dated May 6, 2015 from USFWS David A. Stilwell to Mr. Dave Phillips, Environmental and Wildlife Permitting Director, Apex Clean Energy, Inc. regarding wildlife studies. Page 5 says this:

"In conclusion, the Service strongly recommends that Apex carefully consider the potential effects of the Lighthouse wind project design(in New York state), construction, and operation on wildlife, including protected bats and migratory birds. The project is proposed in an area known to have very high avian activity as evidenced by the studies completed to date. Based upon that information, the risk to wildlife from operating wind turbines could rise to severe levels. Previously, the Service has recommended that wind energy projects be constructed at least three miles from the shoreline of the Great Lakes to reduce this risk." This recommendation by Mr. Stilwell has merit and clearly warns the wind developer not to place the turbines near the shoreline because of the avian impact. If placing the turbines near the shoreline is risky then what about placing the turbines in the water that within a major migratory flyway - like Lake Erie? I doubt Mr. Stilwell would approve.

Icebreaker Turbine Analysis by Jerry Graf

Ohio energy strategist Jerry Graf has released a report a few years ago when LEEDCo planned using a Siemens turbine and developed this information, Icebreaker Turbine Analysis, with convincing scientific data that indicates the \$127k project would not payback the initial investment. Please review Graf's complete data at:

<https://jerrygraf.files.wordpress.com/2013/09/icebreaker-turbine-analysis2.pdf>
Graf's data **Summary** is below.

GRAF's SUMMARY

Mean wind speed at the proposed Icebreaker location at an elevation of 90 m is 8.0 m/s (17.9 mph). Reference: NREL Offshore Wind Maps 2010 This extrapolates to approximately 8.1 m/s at the proposed 100 m hub height

Total annual energy output from the 6 Siemens wind turbines can be expected to be approximately 64,168 MWh, assuming 90% uptime. Reference: WindCad performance model from Bergey Reference: Siemens power curve for SW-3.0-101 Reference: Energy Estimate included in this document

Payback of the initial investment of \$127,000,000 (as reported by WKSU) will never happen. Over \$57,000,000 will remain unpaid after 25 years Assumes \$50/MWh value of electricity (annual average wholesale cost) Assumes inflation of 2.5% on value of electricity Assumes annual O&M costs of \$25/MWh with no inflation applied Reference: "The Wind Energy Operations & Maintenance Report" Feb. 2010 P. Asmus - Pathfinder Communications & M. Seitzler - SRE Engineering

Additional Considerations:

□ *IF WE ARE CONCERNED ABOUT CO2 EMISSIONS: \$127,000,000 could be used to procure approximately 115 MW of combined cycle gas turbine (CCGT) natural gas generation capacity. This would be capable of producing more than 856,920 MWh of reliable and dispatchable electricity every year. This is more than 13 times the electricity that the wind turbines will be able to produce and, by directly displacing coal generation, would have the ability to eliminate more than 6 times more CO2 than the wind turbines can eliminate.*

□ *Despite their supposed presentation as power sources for average everyday power needs, wind turbine projects are often granted special Power Purchasing Agreements (PPAs) which allow prices for their electricity that are many times higher than average wholesale price. It is disconcerting that a large portion of the feasibility studies and the on-going discussion are often devoted to proposals to make the projects appear viable with public spending and it is evident that, to make these projects work, massive government subsidies and large increases in the cost paid for electricity will be required to offset the investment losses and attract investors.*

□ *These economic analyses do not account for the cost that will be incurred to maintain and operate a traditional back-up system for generating power when the wind is not blowing adequately, and for the added cost and inefficiency of cycling this back-up system on and off to balance the supply load against the variability of the wind generated power.*

□ *These analyses are presented for a 25 year period, although it is becoming evident that the useful life of many wind turbines is less than 20 years, and sometimes as little as 10 to 15 years. Siemens estimates the life of the SW-3.0-101 to be 20 years.*

□ *Any supposed reductions in dependency on conventional power generation and any reductions in associated levels of pollution, attributed to use of wind power generation, are highly suspect; because of the need to maintain and operate the back-up systems in an inefficient manner.*

□ *The lowest wind conditions and the lowest power output will occur in the summer, when the electricity demand is highest.*

J.A. Graf Icebreaker Turbine Analysis / SUMMARY

Sherri Lange, CEO, NA-PAW, North American Platform Against Wind Power adds this comment regarding the lifespan of offshore turbines: A final legacy after a short run of maybe 15 to 20 years (the lifespan is not 25 years before mechanical failure sets in, but 10-15) of eco junk, left to rot in the Lake, an embarrassing testament to lack of constraint and forethought.

USACE Public Notice concerns

The following is part of a Public Notice issued by the Buffalo District USACE and published Sept. 13, 2017 regarding the Icebreaker offshore wind project in Lake Erie.

The decision to approve or deny this permit request will be based on an evaluation of the probable impact, including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among these are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and in general, the needs and welfare of the people.

Apparently USACE has ignored all the red flags and ultimately green-lighted the Icebreaker project.

Foghorns are part of this project and I have asked LEEDCo what the decibel output is from these foghorns and LEEDCo's Beth Nagusky replied in a 8/24/17 email to me: *We cannot say at this time what the decibel level of the foghorn will be as we have not chosen the exact manufacturer and model — so the specifications are not yet available. However, we fully expect that the manufacturer will specify something like the following: “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 foghorns are to be audible for 2 miles from the turbines as per the USCG regulations. Ours will be equipped with visibility sensors, so will only be active when there is fog. The draft EA says: The signal on turbine 1 would sound at 670 megahertz (MHz) once every 30 seconds and at turbine 6 the signal would sound at 670 MHz twice every 30 seconds.* Unusual that the power of the foghorns is known but not the loudness and I believe they are deliberately withholding this foghorn loudness information from the public for as long as they can because it will be a persistent nuisance not only to riparians but to boaters too.

Both the OPSB and USACE must consider the future of the Great Lakes when considering approval of this Icebreaker project as approval will ultimately lead to siting **hundreds** of offshore wind turbines within Lake Erie and eventually the other Great Lakes. The above text cites protection of important resources - in this case Lake Erie.

Moratorium - a possibility?

From the beginning LEEDCo staff has promised huge numbers of turbines will occupy Lake Erie water on the USA side. Ontario, Canada has wisely placed a moratorium on offshore turbines since 2011. If the Ohio OPSB approves the project I believe that Ontario, Canada will end its moratorium on offshore wind turbines in Lake Erie allowing offshore wind energy to be developed in Canadian Lake Erie waters and further rape this lake. Would it not be wise for each Great Lakes state to impose a moratorium to prevent populating our Great Lakes with a forest of wind machines? The OPSB should consider a moratorium similar to Ontario's.

There is also severe aesthetic pollution brought by this Icebreaker project because we are looking at the industrialization of Lake Erie. The Icebreaker is NOT a wind farm – it is a *wind factory* as there is nothing pastoral, bucolic or agrarian about this thievery of the lake views and replaced by industrial machines. The public's view and use of Lake Erie for recreation and business cannot be monopolized by this unwanted and unneeded wind energy project. Allowing the Icebreaker to steal the public's fabulous lake view and compelling them to view this visual industrial pollution is unthinkable. Annoying red flashing lights at night on top of turbines (loss of darkness) are another form of visual aesthetic pollution and this condition is worse in foggy weather over the lake.

To permit this visual aesthetic pollution is an abdication of public trust. Ohio is a Public Trust state and the Icebreaker project will eventually have to face a major legal quandary – the Public Trust Doctrine. Is funding in the Icebreaker budget for this consequence?

Public Trust Doctrine problems are plenty

There is an organization called FLOW (For Love Of Water) that explains public trust very well and how it applies to the Great Lakes. Here are some of their comments from their web site. (<http://flowforwater.org/public-trust-solutions/>)

Think of public parks and the beaches and waters of our Great Lakes. Who owns these public spaces and resources? The short answer is that you do, meaning you the public.

This concept of public spaces and resources like water being owned and shared by the public is not a new one; in fact, it is dates back over 2000 years to the times of Roman emperor, Justinian, and has been a part of English common law and our U.S. democracy for centuries. Under Roman law, the public's right to use common resources like the waters and surrounding shores was paramount. "By the law of nature these things are common to mankind, the air, running water, the sea, and consequently the shores of the sea." Under the Magna Carta in 1215, the British

Crown was prohibited from transferring the valuable coastal fisheries to private lords because the seabeds belonged to the people. This is what we now call the Public Trust Doctrine.

By ancient law, passed on from Roman times to the Magna Carta to the Northwest Ordinance, the Great Lakes are a “public trust” – waters and bottomlands held in trust for the benefit of public to use and enjoy.

With that trust comes a duty of stewardship, what the courts have called a “perpetual and solemn duty” to protect the Great Lakes for our use and enjoyment, our children’s, and that of future generations.

The Great Lakes were placed in public trust with the signing of the Northwest Territory Treaty in 1787. Agreeing to these principles was a requirement for statehood for most of the Great Lakes Territories. U. S. Supreme Court affirmed the public trust in 1892, and is a part of common law, court rulings and constitutional law in the Great Lakes States and Provinces.

Public trust law sets forth several basic principles or standards, which in turn provide an overarching framework to govern all decisions, rights, and duties regarding navigable waters and tributaries of the Great Lakes Basin.

- 1. Public trust waters and [protected uses](#) cannot be alienated by government, and in any event may never be transferred or controlled for private purposes. A public purpose is required. (Public [protected uses](#) include navigation, commerce, fishing, swimming, recreation, and drinking water).*
- 2. The proposed diversion or use cannot materially impair the flow, level, integrity, or quality of public trust water and tributary water. It cannot materially impair public trust resources or [protected public uses](#).*
- 3. A duty is imposed on government to account for its actions or approvals of a diversion or use by making duly recorded findings based on adequate information concerning the effects of a proposed use to assure that there is no unlawful alienation or transfer for private purpose and no material impairment of public trust waters or uses.*

There are also four additional principles that flow from the basic principles above.

1. *The substantial value of public trust waters, natural resources, and uses is presumed, and the burden of proof is on those who seek to use or alter the public trust commons or uses, both human and other species.*
2. *The “nibbling effects” or cumulative effects of human actions must be considered and determined by government not to violate any of the core public trust principles or standards before any decision on approval or denial of a use may be made.*
3. *Government has a continuing duty to protect public trust waters, their flows, levels, quality, and the integrity of the ecosystem. In practice, this means that the government has a duty to consider and determine that there will be no impairment or harm to the flows, levels, quality, and integrity of public trust waters, uses, and ecosystem before it makes any decision or approves or denies any request for a permit or other governmental action. This duty includes data and information required for long-term planning and future decisions to satisfy the solemn and perpetual trust responsibility.*
4. *Government must balance two or more competing uses so they share the common public trust waters or public natural resources or commons in a manner that the public trust is not impaired and [protected public trust uses](#), such as boating, swimming, fishing, drinking water, bathing, and other personal or recreational activities are not subordinated to private or non-trust public uses, such as public infrastructure; this means that all reasonable private use and public uses may be accommodated so long as the public trust waters and ecosystem are not harmed and paramount public right to public uses are not subordinated or impaired.*

The Waterfront and Lake Belong to the People (also from FLOW - Public Trust Education)

The story of the public trust in the United States is particularly interesting because the seminal U.S. Supreme Court case took place right here on the shores of our Great Lakes. Over a hundred years ago, the Illinois legislature granted the Illinois Central Railroad one square mile of the downtown Chicago waterfront and Lake Michigan bottomlands for their exclusive and private use.

Realizing the significance of granting away a portion of the state's most important public resource, the following legislature brought the case to the U.S. Supreme Court to invalidate the deed. The Supreme Court ruled that a state may not privatize the public lands and waters that it holds in trust for the use and enjoyment of its citizens. Since this 1892 decision, courts nationwide have recognized public trust interests related to swimming, recreation, navigable tributaries, ecological values, and drinking waters.

Today, the public trust exists in all Great Lakes jurisdictions, providing 40 million citizens a legal right to defend these common waters and their protected uses from harm for current and future generations. Citizens can also enforce this duty when government refuses to act or takes action resulting in potential or actual harms that exceed the boundaries set by the public trust.

Wind Turbines in the Great Lakes by Hannah Treppa says: *The Public Trust Doctrine provides that 'certain public resources, navigable waters and submerged lands are of such importance to the general public that they are incapable of purely private ownership or control. A wind farming project in the Great Lakes would violate the public trust doctrine because the private owner of the wind farm or the turbines would be in private control of something held in public trust. The public trust doctrine is a "principle by which the state holds its navigable waters and the lands under them in trust for the public, and [may] not alienate these lands or waters except when the public use of them is enhanced or when the public use of the remaining lands or waters is not harmed. Thus, a wind farming project in the Great Lakes would further violate the public trust doctrine because the lands under the water would be alienated and the public use of them would not be enhanced. The public is the beneficiary of the trust, and as such, has the right to seek the reversal of any action inconsistent with the right of the state's citizens. Thus, "the public, by an individual, citizen group or representative . . . has standing to bring suit against the State alleging violations of the public trust." A wind farming project in the Great Lakes is likely to result in litigation because any citizen of the eight bordering states has standing to bring suit.*

Read the Ohio Public Trust Doctrine

Ohio has a Public Trust Doctrine statue (as do most Great Lakes states) and it's our belief that the Icebreaker project or any Great Lakes offshore wind project is contrary and illegal according to the Public Trust Doctrine and this policy will likely be court tested in the future and ultimately defeat the Icebreaker

environmental treachery. Keep in mind the Icebreaker is now a for-profit venture and the goal is to eventually locate hundreds of turbines in Lake Erie. Ohio cannot allow a business to tamper with the public's right to use Lake Erie for recreational boating, swimming, fishing, commercial fishing, commercial shipping or interfere with aesthetics that have existed since day one. It is very likely the Public Trust Doctrine will be the cause for major litigation to halt the Icebreaker project from being developed. **Offshore turbines interfere with the public's right to use the lake such as boating, fishing, swimming, commercial shipping, commercial fishing and the viewshed as well as a deadly threat to birds and bats.**

From the Ohio Coastal Management Program, Policy 16 – Public Trust Lands (in part):

IT IS THE POLICY OF THE STATE OF OHIO TO PROTECT THE PUBLIC TRUST HELD WATERS AND LANDS UNDERLYING THE WATERS OF LAKE ERIE, PROTECT PUBLIC USES OF LAKE ERIE AND MINIMIZE THE OCCUPATION OF PUBLIC TRUST LANDS FOR PRIVATE BENEFIT...

and referencing Ohio Revised Code and/or Ohio Administrative Code O.R.C. 1506.10 and 1506.11 and O.A.C. 1501-6-01 through 1501-6-06; O.R.C. 1506.32 and O.R.C. 1506.31

The waters of Lake Erie and lands underlying them belong to the state as proprietor in trust for the people of the state for the public uses to which they may be adapted, subject to the powers of the United States government, to the public rights of navigation, water commerce and fishery, and to the property rights of littoral owners, including the right to make reasonable use of the waters in front of or flowing past their lands (O.R.C. 1506.10). Ohio's "public trust doctrine" was originally established in 1803 when Section 14, Article III, of the "Northwest Ordinance" gave the new state authority to regulate activities occurring in navigable waters within state boundaries.

A 4/7/14 letter from ODNR's John Kessler to Don Rostofor of the OPSB, page 6, says: "The Division of Watercraft offers the following comments - This proposal would affect recreational navigation in the waters of Lake Erie." In the same letter also on page 6 it says: "The Division of Geological Survey offers the following comments. Ice ridges that form on Lake Erie can exceed 30 feet in height and be grounded on the lake bottom. There are concerns that the applicant's proposed design may not reflect knowledge of the potential magnitudes of Lake Erie ice ridge formation."

If the Great Lakes view shed can be desecrated with wind turbines then why not allow giant advertising billboards in the national parks system too. One of the worst view shed experiences I've had was being on the rim of the Grand Canyon and having to tolerate numerous tourist helicopter noise distractions all during our visit. We should not allow a compromise to the scenic quality of the Great Lakes by allowing turbines in the lakes as there is no mitigation to a view shed debacle.

The U.S. Supreme Court ruled in *Illinois Central Railroad Company v. Illinois* 146 US 387 (1892) that the state may not abdicate its control of public trust properties and leave them under private control. Subsequent court decisions have looked with disfavor upon governmental actions that reallocated public uses to those of a select, private party. *The Illinois RR case is a landmark law case that is referred to in most any Public Trust Doctrine litigation.*

The Icebreaker, is a commercial for-profit venture by a foreign company and is in conflict with Ohio's Public Trust Doctrine as well as basic public trust principles

Section 10 of the Rivers and Harbors Act (RHA) of 1899

The Icebreaker project fails the requirements of River and Harbors Act of 1899 which states:

That the creation of any obstruction not affirmatively authorized by Congress, to the navigable capacity of any of the waters of the United States is hereby prohibited; and it shall not be lawful to build or commence the building of any wharf, pier, dolphin, boom, weir, breakwater, bulkhead, jetty, or other structures in any port, roadstead, haven, harbor, canal, navigable river, or other water of the United States, outside established harbor lines, or where no harbor lines have been established, except on plans recommended by the Chief of Engineers and authorized by the Secretary of War; and it shall not be lawful to excavate or fill, or in any manner to alter or modify the course, location, condition, or capacity of, any port, roadstead, haven, harbor, canal, lake, harbor of refuge, or enclosure within the limits of any breakwater, or of the channel of any navigable water of the United States, unless the work has been recommended by the Chief of Engineers and authorized by the Secretary of War prior to beginning the same.

An environmental impact statement is required

An environmental impact statement (EIS), under United States environmental law, is a document required by the National Environmental Policy Act (NEPA) for certain actions "*significantly affecting the quality of the human environment*" and this was mentioned in a letter dated Oct. 21, 2016 from USFWS Dan Everson to Roak Parker of DOE and is also found in the draft EA Appendix A on page 7. Mr. Everson makes these poignant comments to Mr. Parker in his letter, page 3:

"...millions of migrating birds move through the Great Lakes region during spring and fall migration each year. (Rich et al. 2004, France et al. 2012, Horton et al., 2016) and page 8: *This project presents unique risks to migratory bats and migratory birds including the bald eagle due to the proximity of the project area to significant migratory bird and bat habitat and concentration areas, specifically the offshore areas of Lake Erie. We believe an EA is inadequate to fully address the potentially significant, president setting aspects of this project. We recommend that the DOE conduct an EIS to document the significance of the proposed project on fish and wildlife resources.*" Post-construction monitoring will do nothing to prevent the slaughter of birds and bats for years and years. Remember - this is NOT merely a 6-turbine project! Unfortunately the DOE didn't follow the recommendation of the USFWS to conduct an EIS.

Generally an EIS is prepared by a qualified environmental contractor chosen by the USACE, with the applicant responsible for the cost of preparation. When the Corps determines an EIS is necessary for a proposed action, the applicant will be notified in writing and requested to provide at least three (3) qualified third-party contractors who could prepare the EIS, in order of preference to the Corps. The contractor should have experience with NEPA and the Corps regulatory program. The Corps will choose the first qualified contractor on the list and notify the applicant of the choice. The Corps will work with the applicant and the contractor to prepare a Statement of Responsibilities and Scope of Work for the EIS preparation.

USACE should have demanded or mandated an EIS be conducted before any approval is given to the Icebreaker project. USACE should support USFWS in this regard.

Unfortunately, there have been no public hearings conducted by USACE concerning the Icebreaker project.

Is the OPSB, DOE, ODNR, USACE, Coast Guard, PUCO afraid of an EIS?

DOE's conflict of interest

The DOE has a conflict of interest with issuing the draft and final EA. The DOE does support the project - no question about it as they've granted millions to the project already. How could the DOE say no to the project after slipping LEEDCo millions? Then how can the DOE's draft or final EA be balanced and impartial? How can they allow redacting of draft EA info? Where's complete transparency in the process? DOE is heavily biased in this matter and this all reeks of a conflict of interest and has failed to completely answer my FOIA's.

PUCO's Icebreaker Whitewash

Here are my comments on PUCO's Staff Report of Investigation dated July 3, 2018 on the Icebreaker offshore wind project.

It is unbelievable that PUCO seems to take at face value all the information provided by Icebreaker Windpower Inc. on the Icebreaker project without challenges by a knowledgeable third party experts with no dog in the fight. The third party would be hired as a consultant by either PUCO or OPSB. Obviously LEEDCo and Icebreaker Windpower Inc. hand-picked organizations that would pooh-pooh any controversial issues about the project that might become a compelling threat. Reading Icebreaker Windpower's application for the project should soon convince the reader of numerous critical issues that are dismissed with a wave of the hand. One of those examples is when the OPSB project application simply states on page 101 that: *As indicated above, the existing body of literature indicates that very few species of birds and bats use the area proposed for construction of the Icebreaker Wind turbines.* This is how Icebreaker Windpower summarizes the impact the project will have on birds and bats in one of the most significant bird and bat migratory routes in North America. Only a fool would believe this trash and the OPSB should believe those who truly know about birds and bats in Ohio which would be the Black Swamp Bird Observatory and the American Bird Conservancy - organizations uniquely qualified to advise the OPSB on that risk assessment. Matt Markey, a staff writer for the Toledo Blade

newspaper said it best in a July 10, 2018 article: *They accuse the wind agents of expert shopping, and crafting studies simply to create the desired outcome, while ignoring the real threat these turbines pose to anything that flies.*

The people pushing this project have continually lied about its benefits, misled the public at their talks, overstated offshore wind benefits, and generally grossly misrepresented what the project is really about. Unfortunately there is no way for the public to question (with their attorneys present) the developers, OPSB, DOE, PUCO, Coast Guard, ODNR, USACE and other involved agencies and they are not mandated to give answers to the public. There is no opportunity for the general public to (legally) question any aspect of this project. Public hearings are almost a complete waste of time and nothing said by developers at a casual town meeting would be applicable in court. Town meetings and public hearings are merely another hoop the developers need to jump through to make the general public feel good as well as comply with OPSB rules - a complete sham and waste of the public's time.

I've gone through the PUCO staff investigative report to OPSB and have these comments. Text in italics is copied from the investigative report.

page 2 - *Any party to the proceeding that believes its issues were not adequately addressed by the Board may submit within 30 days an application for rehearing. 14 An entry on rehearing will be issued by the Board within 30 days and may be appealed within 60 days to the Supreme Court of Ohio.* Is a "party" any common Ohio resident or property owner? A "party" needs to be defined.

page 7 - *Characterized as a demonstration-scale project, the Applicant has indicated that it has no plans for further expansion at this point of interconnection.* This is a monumental precedent setting project that's sure to negatively change the face of the Great Lakes forever if the Ohio Power Siting Board approves the Icebreaker. There are numerous examples of LEEDCo staff boasting about how many Mw of power would be generated in Ohio's Lake Erie following the demonstration project approval. Approval of this project will set a precedent making it possible for numerous foreign developers to infiltrate Ohio's Lake Erie with thousands of offshore turbines.

page 8 - *The Applicant expects that the annual energy production for the facility would be approximately 75,000-megawatt hours (MWh).* (this should be checked for accuracy)

page 9 - *Approaching the shore, the final approximately 3,700 feet of export cable would be installed using horizontal directional drilling (HDD) allowing the cable to travel under the Cleveland Harbor breakwater and Cleveland Harbor.* (this should be checked by a third party if it's legal to use HDD. HDD is a controversial technique that can pollute)

page 9 - *Following testing and commissioning of the facility, the Applicant anticipates placing the facility in service in approximately December 2021.* Those of us following the Icebreaker project realize this service date has been changed numerous times over the years. I have no faith this project will see operation in 2021! Does anyone know how many Icebreaker operation dates have been missed already? (many!)

page 13 - *Staff recommends that the Board find that the basis of need as specified under R.C. 4906.10(A)(1) is not applicable to this facility, as the facility is neither an electric transmission line nor a gas pipeline.* (then why is the name of the OPSB certificate called *Certificate of Environmental Compatibility and Public Need*) also - USACE says a "need" is required. PUCO staff has found a huge loophole to determine that the Icebreaker wind factory fails the basis of need! An 11+ mile submerged electric transmission line is definitely part of this Icebreaker project and PUCO should not eliminate the "need" requirement. Ohio courts should study this matter and determine if a wind factory should meet the "basis of need" as specified under R.C. 4906.10(A)(1). PUCO is over stepping their authority by arbitrarily claiming "need" is not applicable to a wind factory and I believe this is incorrect and definitely needs to be legally defined. PUCO is ignoring this "need" point because it threatens issuance of a certificate by OPSB. PUCO's conclusion on "need" hopefully will be challenged in court in the future.

page 14 - *Proposed turbine foundations would be mostly buried under the lakebed.* (I believe this is completely false - read in Section 2 Proposed Action and Alternatives DOE/EA-2045 how mono bucket foundations are actually being lowered into the lake bottom mud and the water will be pumped out of the foundation interior causing the foundation to self-penetrate into the mud - so they say. Obviously PUCO doesn't understand the mono bucket foundation installation process otherwise they wouldn't have incorrectly claimed the mono bucket foundations would be buried under the lakebed)

page 18 - *Staff has found that the mono bucket design is a commonly used foundation design for offshore wind turbines and believes that it is reasonable to use at this proposed facility.* (the mono bucket design has **never been used in freshwater** where ice conditions might create ice as thick as 12" such as Lake Erie. The cumulative effect of ice, shifting ice, wind, waves, tower subtle changing verticality, other dynamics will topple the turbines) Using a mono bucket foundation design is risky business that will fail over time.

page 18 - *The Applicant stated that it acquired ownership of the project from LEEDCo, and currently owns all project assets. The Applicant anticipates that it would continue as owner of project assets during development of the project.* In my opinion - issuance of a OPSB certificate allowing the project construction is like putting a for sale sign on the project. LEEDCo currently no longer owns this project - it is now foreign owned by a Norwegian company and they are providing the money to continue its development. Hasn't the OPSB questioned where the money is coming from for current Icebreaker development work?

page 19 - *Total cost comparisons between the proposed facility and other comparable facilities are to be provided in the application. The Applicant stated that it had no similar facilities to provide for cost comparisons.* How convenient for Icebreaker to cop out on a required answer on this easy question. They've been saying for years this project can be built for \$126M - but where is the money really coming from? Who would be responsible for an overrun?

page 19 - Delays that would prevent the project from meeting federal Investment Tax Credit deadlines would result in the loss of those benefits to the Applicant. Additionally, the Applicant stated that significant delays could result in the loss of funding under its USDOE financial assistance award. Although the Applicant's estimate of this amount was filed under seal, the USDOE states on its website that *This project is eligible for up to \$40 million in additional funding in future project performance periods after reaching specific milestones, and subject to DOE progress reviews. The Applicant's characterization of its estimated costs of delays appears reasonable to Staff.* No place is the LCOE given which is of prime importance to DOE and a potential show stopper. DOE has refused to answer my FOIL requests for LCOE information even though they know the answer. I suspect DOE won't answer my LCOE FOIL requests because the LCOE data is well over their threshold and a project show stopper.

page 20 - *Estimated PILOT payments were between \$124,000 and \$186,000 per year.* Where did this PILOT estimate suddenly come from? Who benefits from the PILOT payments? Are they still planned to be made? By whom? To whom?

page 21 - *No soil samples were determined to be toxic or contaminated to the extent that there would be an adverse effect to the lake environment from the construction of this project.* I find this impossible to believe knowing the history of pollution in Lake Erie and the numerous toxins that contaminated the Lake Erie bottomlands from decades of pollution.

page 21 - *However, the offshore project components – the turbines and transmission line – would be expected to produce minor and temporary water impacts during the construction phase.* Grossly understated! This is exactly what will lead to contamination of drinking water as well as toppling turbines with their 400+ gallons of fluids leaking into the lake.

page 21 - *However, the foundation installation would result in some disturbance due to potential resuspension of lakebed sediments. The disturbance would be produced both by the foundations, as well as by the supports of the jack-up vessel(s) expected to be used during construction. The Applicant expects this disturbance to be short-term and relatively contained, due to minimal water current in the area.* This is another source of drinking water contamination that's being pooh-poohed and accepted by PUCO. What will PUCO and OPSB think when hundreds and maybe thousands of turbines are installed in Lake Erie (and other Great Lakes) following the Icebreaker demonstration project?

page 21 - *While the use of HDD for installation of the section of electric cable near the shore would limit disturbance, the portion of the cable that would be installed using a trenching technology would result in some temporary disturbance to the bottom sediments. As with the turbine impacts, the cable line impacts are expected to be short-term and localized.* More drinking water contamination and pooh-poohing - HDD installation contamination is understated!.

page 22 - According to the Applicant, the Cleveland Water intake structure closest to the proposed turbine locations is just over four miles away.

page 22 - *Birds and bats are likely to be impacted by this project* Grossly understated!

page 23 - *However, there are still elements of avoidance, attraction, and/or displacement that cannot be evaluated until the project is constructed. Can't help but wonder what these elements are? The project should not move forward to construction until the elements are identified and understood and documented to be non-threatening. Compel Icebreaker to list the elements!*

page 23 - *Construction of the facility would not be permitted until all parameters of the studies were mutually agreed upon by the ODNR and the Applicant, and the Applicant is in compliance with the parameters of those studies. Icebreaker should be closely held to this requirement including what the USACE and PUCO staff investigative report demands.*

Dr. Diehl (Icebreaker's avian expert) stated, "Far too many unknowns are present to anticipate the outcome of radar work in relation to this project." (about birds and bats) Does this comment give you confidence in the project? How could the project be allowed to move forward knowing this? Isn't this enough to say no?

page 24 - *The Applicant's conclusion that impacts would be low was based, in part, on the assumption that migratory species would remain close to the shore and not cross over the lake. However, recent USFWS radar monitoring in Cleveland has shown large numbers of nocturnal migrants exhibiting flight patterns that suggest they are crossing the lake, which demonstrates the importance of a successful radar study How could the applicant's conclusion be so wrong in the first place? **USFWS recommended an EIS for this project - why isn't it being done? An EIS should be required but since it's a possible show stopper it's likely not to be done!** Why isn't reliable data from the Black Swamp Bird Observatory being accepted? They know more about Ohio avian life than any other organization.*

page 24 - *Staff recommends that if the preconstruction radar data does not meet the above listed criteria, as determined by Staff and the ODNR, construction should not be allowed to commence until such requirements are satisfied. Icebreaker should be closely held to this requirement. Has preconstruction radar data met the listed criteria - where does it says this?*

page 24 - *There are currently no proven post-construction collision monitoring technologies or methodologies available for the offshore wind setting. The Avian and Bat MOU states that the Applicant is committed to "continuing to evaluate developing technologies and available options with the expectation of*

implementing a robust collision-monitoring program during” operation. During operation? - that's too late to allow. How convenient that Icebreaker's slaughtered birds and bats will be conveniently flushed away by lake currents to prevent true mortality compilation. Is OPSB foolish enough to think Icebreaker Windpower Inc, would ever share the true data on bird and bat mortality figures from the project?

page 24 & 25 - Post-construction monitoring protocols would be approved by the ODNR prior to construction. Staff recognizes that having an approved post-construction monitoring protocol in place prior to construction is a critical component of assuring the project does not result in significant impacts to avian and bat species. Once the project is constructed, Staff recommends that turbines be feathered completely from dusk to dawn from March 1 through January 1, when bats and migratory 25 species would be most vulnerable to collision, with limited allowances of operation for testing purposes assigned by the ODNR. These feathering requirements would be in place until the post-construction monitoring plan is proven effective as determined by the ODNR and Staff I believe Icebreaker will pressure OPSB heavily to drop this PUCO recommendation .

page 25 - Staff also recommends that the certificate be conditioned so that if Staff and the ODNR, in coordination with the USFWS, determine that a significant adverse impact has occurred to avian or bat species, then mitigation measures would be prescribed to the Applicant. Prescribed mitigation measures may include operational restrictions of up to a complete feathering of turbines from dusk to dawn from March 1 through January 1. Feathering of turbines should be mandatory in this project.

page 26 - According to a Lake Erie lakebed substrates map produced by the ODNR, mud is the primary substrate at the turbine locations. The ODNR ranks mud as the most favorable sediment type for wind turbine placement as it is a poor substrate to sustain aquatic biodiversity and offers little to no value for spawning. Placing turbines in the lake bottom mud will not hold the required verticality spec. Professional third party engineers should strongly investigate method of turbine foundation and placement. This is one of the greatest risks of this project!

page 26 - Conclusions about potential impacts of offshore wind turbines on avian, bat, and aquatic resources would require a comparative analysis of both pre- and post-construction data. What happens when post-construction data is unacceptable - does the project become history?

page 27 - *Staff determined each turbine's base must be located at least 1,331 feet from the nearest property line.*

page 28 - *The turbines proposed in the application are designed to withstand high wind speeds. Highest historical wind speeds on Lake Erie should be mentioned. Are Vestas V126 turbines capable to withstanding these speeds?*

page 28 - *The Vestas V126 wind turbine has been certified by the IEC and is available as a Class IIA or Class IIB wind turbine. IEC Class II provides that the structure is designed to withstand an annual average wind speed of 8.5 m/s (19 mph) and extreme 10-minute average wind speeds of 42.5 m/s (95 mph).*

page 29 - *The Applicant indicates that the proposed turbines have ice detection equipment and safety features that would shut down a turbine if the buildup of ice causes excess vibration or the speed to power ratio to become too high. (I can find nothing indicating heated turbine blades will be used which was said in the past to be built into the blades)*

Noise would be generated during both construction and operation of the facility. How do lakeshore property owners know what amount of noise will forever be created? They won't know the answer until it's too late to stop and their quality of life will be diminished and their lake shore property worth far less. And then wait till hundreds of more turbines are placed in the lake.

The use of HDD should result in minimal noise impact to the aquatic environment. Pooh-poohed again!

page 30 - *Television stations broadcast signals from land-based facilities directly to television receivers. Due to the eight to ten miles distance between the facility's turbines and transmitter/receiver sites, neither the Applicant nor the Staff anticipates that the facility would affect television or radio reception. I can often see on Rochester, NY channel 10 TV weather where the terrestrial turbines in Wyoming Co. NY show false readings on their televised weather map.*

Wind turbines can interfere with civilian and military radar in certain scenarios What will happen if civilian and military radar is affected by the wind project? This is not spelled out in any detail.

Administration identified a concern with degradation of its radar systems' ability to detect lake effect snow. Since that initial response, the Applicant has been in communication with the National Oceanic and Atmospheric Administration who further analyzed the situation and found that the impacts to its radar would be acceptably low. This should be treated as a show stopper as anything that degrades radar is a national security risk for our country.

page 31 - decommissioning - is not spelled out in enough detail. A good plan for decommissioning hasn't even been developed yet but should be spelled out in extreme detail as whoever is the owner (after numerous project sales) when decommissioning takes place will attempt to delay decommissioning as long as possible to avoid the expense.

The Applicant commits to providing a final decommissioning plan to the OPSB at least 30 days prior to the preconstruction conference. This final plan is to include at least a description of the engineering techniques and equipment used in the decommissioning, as well as a detailed schedule for each task.

Prior to initiating construction, the Applicant proposes to determine an appropriate removal deposit amount to be set aside for decommissioning activities. These funds, as proposed by the Applicant, would take the form of a surety bond or similar financial instrument. The deposit amount would be subject to State of Ohio approval.

Recommended Findings Staff recommends that the Board find that the Applicant has determined the nature of the probable environmental impact for the proposed facility....

The Icebreaker, if developed, will be sold numerous times probably to foreign investors who will milk the project for as long as it generates income and then unload it when no longer profitable. The project has already been unloaded once already when LEEDCo was in deep financial trouble and unloaded the Icebreaker to Fred Olsen Renewables of Norway. At some point it will be discovered there is not enough money to decommission the turbines and that funding for decommissioning will need to be made by the American taxpayer to remove a deplorable eyesore in Lake Erie. Decommission costs and the money needed for this purpose are very poorly spelled out in the application. Decommissioning costs should be made before project construction begins and held in trust by Ohio till needed.

page 32 - *There are no potential impacts to individuals onshore associated with operational noise, shadow flicker, ice throw, or blade shear. The visual impact is also reduced by virtue of the distance of the proposed turbines from individuals on shore.* Here's another great example of pooh-poohing major issues. The sound in decibels from the fog horns has never been released to the public for obvious reasons and dismissal of the visual impacts of the project is another insult. And the night-time turbine lighting and flashing of the turbine strobe lights will create the illusion of an amusement park or battlefield at night and Lake Erie lakeshore property owners near the project will have lost their treasured darkness forever and start running to their town assessors demanding a deserved reduction in their assessments as their property has lost value.

As sited, the facility is not expected to negatively impact television or radio reception, nor would it materially impact microwave communication systems or radar. The 6-turbine Icebreaker may or may not affect television but what happens if it does affect television - what will be done to correct the problem without expense to the home owners? And when hundreds of turbines are soon pin cushioning the lake - there will be substantial unrepairable TV disruption.

page 33 - *Staff concludes that the proposed project would result in both temporary and permanent impacts to the project area and surrounding areas.* Pooh-poohed again!

page 34 - *Pursuant to R.C. 4906.10(A)(4), the Board must determine that the proposed electric facilities are consistent with regional plans for expansion of the electric power grid of the electric systems serving this state and interconnected utility systems, and that the facilities will serve the interests of electric system economy and reliability.* What electrical energy generating system could possibly be more costly to customers and less reliable - than wind power?

The Applicant would make 7.5 MW of energy available in the PJM market. The remaining 13.2 MW would be sold to CPP and considered by PJM to be behind-the-meter-generation. I'm not convinced that all the minute amount of Icebreaker power has yet been sold. (36.4% unsold?) Will this excess power simply be bottled?

page 35 - *The studies revealed that, at an output of up to 18 MW, there would be no reliability problem.* But what about the Icebreaker's 20MW output - is there a reliability problem?

pages 41, 42 - Public interest - PUCO listed a mere 4 positive impacts of the project in public interest but didn't list any negative impacts and then concluded: *Staff concludes that the project is in the public interest.* This is hardly a true statement as few Ohio residents really know about this Icebreaker nor understand the numerous negatives associated with the Icebreaker. They will soon learn the negatives after it's too late. How could PUCO staff possibly make this outrageous statement?

Most of the rest of the PUCO report (to page 52) consists of recommended conditions of certificate PUCO is recommending to the OPSB. Who knows if any recommended conditions will be applied to the project by OPSB? No doubt Icebreaker Windpower Inc. is trying to get many of the PUCO recommended conditions deleted to save the project and I suspect less than half of them will be complied with in the end.

It is unfortunate that PUCO is sold on this project, with many conditions, but that is not unexpected and we anticipate OPSB will do likewise.

The PUCO staff investigative report can be read in its entirety at:
<http://dis.puc.state.oh.us/TiffToPDF/A1001001A18G03B43530D00369.pdf>

EA-2045: Final Environmental Assessment

EA-2045 Final Environmental Assessment says this:

Based on the analysis presented in the final EA, DOE has determined that providing federal funding to Lake Erie Economic Development Corporation in support of Project Icebreaker would not constitute a major Federal action significantly affecting the quality of the human environment. As such, DOE has also issued a Finding of No Significant Impact (FONSI) for the proposed action. An environmental impact statement will not be prepared. The federal government cannot provide federal funding to Lake Erie Economic Development Corporation

because LEEDCo does not own the project any more having apparently sold the project to Fred Olsen Renewables. Lake Erie Economic Development Co. was never the project applicant either. And I question if federal funding can be provided to a for-profit foreign corporation such as Icebreaker Windpower Inc. It is shocking to learn at this late date that the EA is concerned only with the project significantly affecting the quality of the human environment yet the FONSI mentions both human and natural environment on page 1 in the Summary. Apparently all other elements of natural environment are of no concern in DOE making this decision along with USACE and Coast Guard input. LEEDCo apparently sold this Icebreaker project (in 2016 maybe?) to Fred Olsen Renewables and should not be considered as being presently involved in its development. LEEDCo should not be mentioned in any part of the draft or final EA-2045 as they ruled themselves out of the project after selling the project to Fred Olsen. I believe the reason for the sale was because of severe financial problems LEEDCo had gotten themselves into up to the point of sale and I have information to support this.

The EA-2045 FONSI page 1 says:

The measures are not necessary to decrease the level of impact below significant, but the measures are intended to further reduce the likelihood of impacts and to insure the Proposed Project is carried out in an environmentally responsible manner. If this isn't contradictory I don't know what is.

It is disgusting to read in the FONSI: *Minor long-term impacts to birds and bats, cultural resources, aesthetic and visual resources would be associated with the presence and operation of the turbines.* These impacts are MAJOR not minor.

Page 5 of the FONSI says: *The federal funding would be contingent on LEEDCo obtaining and complying with all appropriate federal, state, and local authorizations required for the Proposed Project.* Why isn't Icebreaker Windpower Inc. taking the place of LEEDCo in everything related to this matter? How can LEEDCo or it's staff receive federal funding when legally they're not involved in the project any more? How and why is LEEDCo involved in any decision making involving this project - they've sold the assets? All the decision making by the DOE related to the Icebreaker is arbitrary and biased

CEQ NEPA Implementing Procedures

40 CFR Parts 1500 - 1508

Title 40: Protection of Environment

PART 1502—ENVIRONMENTAL IMPACT STATEMENT

§1502.4 Major Federal actions requiring the preparation of environmental impact statements.

(c)(3) By stage of technological development including federal or federally assisted research, development or demonstration programs for new technologies which, if applied, could significantly affect the quality of the human environment. Statements shall be prepared on such programs and shall be available before the program has reached a stage of investment or commitment to implementation likely to determine subsequent development or restrict late alternatives.

The information within CEQ NEPA (c)(3) clearly mandates that this project should be required to conduct an EIS as it is federally assisted and a demonstration project for new technologies and may impact the human environment. The USFWS also refers to information within CEQ NEPA regulations demanding that the project should be required to develop and conduct an EIS.

Lake Erie is not owned by the OPSB - it is partially owned by the people of the state of Ohio. The lake is also partially owned by the people of Pennsylvania, New York, Michigan and Canada's Ontario. In the Lake Michigan 1892 legal case *Illinois Central R.R. Co. v. Illinois*, 146 U.S. at 453 it says: "*The State can no more abdicate its trust over property in which the whole people are interested, like navigable waters and soils under them, so as to leave them entirely under the use and control of private parties ... than it can abdicate its police powers in the administration of government and the preservation of the peace.*" The application to the OPSB is from Icebreaker Windpower Inc. - a private foreign company - a for-profit company that looks forward to making a profit for their shareholders. For the OPSB to allow this project is the abdication of Ohio's trust to act as responsible stewards of Lake Erie and for the OPSB to grant a certificate to Icebreaker Windpower Inc. is contrary to the principles of the Public Trust Doctrine and in conflict with this landmark decision from 1892 - AND ILLEGAL.

In the seminal case of *Illinois Central R.R. Co. v. Illinois*, 146 U.S. 387; 13 S. Ct. 110; 36 L. Ed. 1018 (1892), the United States Supreme Court plainly held that the Public Trust Doctrine applied to the Great Lakes. The Court recognized that the doctrine: "*is founded upon the necessity of preserving to the public the use of*

navigable waters from private interruption and encroachment, a reason as applicable to navigable fresh waters as to waters moved by the tide"; Illinois Central R.R. Co. v. Illinois, 146 U.S. at 436. I believe the Public Trust Doctrine also applies to the public's use of the lake for swimming and boating recreation and would cause a private interruption and encroachment of the public's swimming and boating rights as well as fishing and navigation issues. I also believe that the erection of 479 ft. tall offshore wind turbines is a gross private interruption of the public view shed and contrary to the Public Trust Doctrine principles. I also believe that the turbine's flashing red strobe lights are a private interruption and encroachment of the public's right to darkness over Lake Erie and may also interfere with avian life. I also believe that fog horns mounted on the turbines are a private interruption and encroachment of the public's right to quiet over the lake and may also interfere with avian and marine life. The decibel level of the fog horns has never been released despite my requesting this information via the FOIA process. Who could have possibly anticipated in 1892 the gross private interruption and encroachment issues this offshore wind project will bring if the OPSB approves it?

The OPSB is a 7-member committee that is a non-elected bureaucracy seemingly with the power to permit the Icebreaker offshore wind project. It's possible that when the OPSB votes on this project that the vote might result 4 to 3 in favor of the Icebreaker. I find it appalling that with just one majority vote the OPSB could industrialize Lake Erie with offshore turbines and set a horrible precedent for all the Great Lakes in the future. And that 1 majority vote could be for personal reasons and not for the benefit of the people of the state of Ohio. This wonderful natural resource could become drastically changed forever as a result of just one OPSB vote - is this for the greater good for the people of not only Ohio but the other neighbor states and province as well? In my opinion the task to be undertaken by the OPSB in this matter that may allow this project is illegal and will eventually be challenged in the court system and see the OPSB approval decision reversed if their vote favors the Icebreaker.

Ohio, within its boundaries, holds the lake and bottom lands "*in trust for the people of the State that they may enjoy the navigation of the waters, carry on commerce over them, and have liberty of fishing therein freed from the obstruction or interference of private parties*"; per *Illinois Central R.R. Co. v. Illinois*, 146 U.S. at 452. **Icebreaker Windpower Inc. is a private foreign business.** This illegal project could eventually be sold to another foreign party and soon other foreign parties will appear to stake out the lake for installing hundreds or thousands of

offshore turbines for their profit while Americans (and Canadians) regret and suffer the consequences and loss of their Great Lakes forever and witness a hooligan's circus upon drinking water for millions of people thanks to a poor OPSB decision. Why should the OPSB be allowed to give away this precious resource to a foreign company to profit from? And will \$40m+ taxpayers dollars assist in this debacle? There are companies at work right now attempting to design floating offshore wind turbines that can be placed anywhere and ignore unfavorable bathymetry and the associated problems.

At the very least it should be the people of Ohio that vote for or against the Icebreaker - not an unelected committee of bureaucrats that may not use or live near Lake Erie. If the residents of Ohio voted to industrialize Lake Erie in Ohio's waters - then so be it and the generations that follow can suffer from their ancestors poor decision.

Icebreaker Windpower Inc. does not have a website and never has. Icebreaker Windpower Inc. President is Lorry Wagner who is also currently listed as President of LEEDCo (Lake Erie Energy Development Corp.) - the company that sold their assets to Fred Olsen Renewables - a Norwegian company. For a company that is supposed to be developing a \$126M dollar offshore wind project - I cannot determine if there is a board of directors for Icebreaker Windpower Inc. I cannot determine what Fred Olsen paid LEEDCo for the LEEDCo assets despite a FOIA request to DOE seeking this info. (DOE would not say even though they know the answer) Much of the LEEDCo assets that were sold - were paid for with US taxpayer money granted to LEEDCo by DOE over time. I'm a US taxpayer and want to know who the recipient was in the Icebreaker sale? Who got the money and how much money did they receive? Where is the money today? Lorry Wagner has earned about \$249,000 per year as President of LEEDCo - this is public information if you can find it. The Icebreaker project went from being a not-for-profit under LEEDCo to a private for-profit after the "sale" to Fred Olsen and this happened when LEEDCo was in deep financial trouble with the Icebreaker project. Nobody will share LEEDCo information although many people, especially DOE, know the answers to my questions. Since DOE is heavily in favor of the Icebreaker project they will not cooperate as they should with FOIA requests and be transparent as that may risk OPSB approval and sway more people against the project. Since Lorry Wagner also now works as President of Icebreaker Windpower Inc., the foreign, for-profit company, we'll never know if he's getting a salary, how much it is and if he's double dipping as President of both LEEDCo and Icebreaker Windpower Inc.

Leedco sent out an appeal for labor unions, Sierra club members, Ohio Environmental Council, Ohio Citizen Action, EDF, Green Energy Ohio, Mom's Clean Air Force and numerous elected officials to support this offshore wind project. Funny that LEEDCo should send this email out and not Icebreaker Windpower Inc. - the applicant for the OPSB *Certificate of Environmental Compatibility and Public Need*. LEEDCo apparently doesn't own the Icebreaker project anymore and really should have nothing to do with the wind project. The LEEDCo appeal letter is not even signed by a person either. What happened to Lorry Wagner? And this recent email was sent by VerticalResponse -an email marketing service - wonder why they're doing this and not Icebreaker Windpower Inc.? The LEEDCo appeal letter also made an error when their appeal letter said "Last week, the Ohio Power Siting Board staff gave Icebreaker – the first fresh water offshore windfarm in North America – tentative, conditional approval." as it was NOT the OPSB that gave tentative, conditional approval but it was PUCO (Public Utilities Commission of **Ohio**) that gave conditional approval with numerous stipulations. I cannot understand why LEEDCo is sending out this letter when they are legally no longer involved in the project as they have sold all the LEEDCo assets of the Icebreaker project to Fred Olsen Renewables that has now morphed into the company called Icebreaker Windpower Inc. At this time Icebreaker Windpower Inc. is NOT currently eligible for any more DOE grant money and may never qualify for additional DOE grant money. It would be foolish for the OPSB to issue a *Certificate of Environmental Compatibility and Public Need* for the Icebreaker knowing that Icebreaker Windpower Inc. may not now qualify for the millions in DOE grant money needed to complete the \$126m project. It's time the truth be known.

The names of the OPSB members voting to approve the Icebreaker project will not be forgotten. As of Sept. 15, 2018 the voting members are:

OPSB Members

- ☐ **Public Utilities Commission of Ohio.** Sam Randazzo, Chairman
- ☐ **Ohio Department of Agriculture.** Dorothy Pelanda, Director
- ☐ **Ohio Development Services Agency.** Lydia Mihalik, Director

- ❑ **Ohio Environmental Protection Agency.** Laurie Stevenson, Director
- ❑ **Ohio Department of Health.** Amy Acton, M.D., MPH, Director
- ❑ **Ohio Department of Natural Resources,** Mary Mertz, Director
- ❑ **Public member, Gregory Murphy, P.E.**

Lake Erie cannot speak for itself but the deplorable Icebreaker facts do shout loudly that there's no need for this project. The OPSB should reject this project based solely on lack of need.

SUMMARY

Apparent justification for the Icebreaker project is charlatans' false proclamations that such a project will create jobs and a dramatically improved economy for Ohioans – jobs manufacturing wind turbines. The “jobs” promise is part of every wind scam and serves to suck in public official's support, an abuse of innocent trust and the abdication of our environmental values. Wind energy always needs a dance partner and making Ohio a prostitute for this exploitation and rape of Lake Erie - is socially, environmentally, economically and technically reckless.

The LEEDCo project is merely a precursor for future aggressive offshore wind development that will amount to hundreds, maybe thousands of turbines in Lake Erie, transforming this lake into an enormous industrial complex for the rest of everyone's lives. Think about what Leedco has promised and what their goals are.

US Coast Guard Permit for Private Aid to Navigation - to the best of my knowledge this permit has not yet been granted.

It is grossly unfair that the OPSB changed the Case Number of the Icebreaker project from 13-2033- EL-BGN to 16-1871-EL-BGN thus dismissing the enormous effort against this project by numerous individuals while not compelling LEEDCO to begin at square one for the same reason. Using this reasoning, the OPSB should dismiss all of the "power pledge" forms collected by Leedco for the same reasons the OPSB has chosen to discard all the hundreds of hours work submitted by those opposed to the project.

It is repulsive to think that 7 voting persons from the OPSB can cause the industrialization of Lake Erie and begin ruining the character of the entire Great Lakes system forever for the sake of unneeded, volatile, low quality, expensive, incurably intermittent, non-storable electricity. In reality this is not a 6-turbine project. DOE has long been in favor of wind projects so why should anyone think DOE would do anything but support the Icebreaker regardless of cost, benefits, irreversible environmental damage, public health, lake use, socioeconomics, aesthetics, noise, public trust or any other faults associated with the project. And now DOE is expecting government partner OPSB to chime in with the same conclusion.

The Icebreaker project is so significant that the decision for industrializing Lake Erie in Ohio waters with offshore turbines should be made by Ohio voters at the polls during a general November election and not by 7 unelected members of the OPSB. As it is - this project will be decided by the majority of 7 voting members of the OPSB. It's possible that the entire project to begin the industrialization of Lake Erie and the Great Lakes could be decided by just 1 OPSB vote!

With the Icebreaker or Great Lakes offshore wind - there's no community benefits package, no property tax payments, no payments in lieu of taxes, no local control, no guarantee USA made turbines will be used or that USA workers will build and maintain the offshore project, and all of this leading toward energy poverty in the end. LEEDCo and the wind industry have unleashed half-truths, and exaggerations to foster the mouth-watering appeal or opportunity of offshore wind.

No - the Icebreaker's 6 turbines won't by itself destroy Lake Erie but will certainly be the first step to opening the door to hundreds or thousands of offshore turbines in the Great Lakes and this future use of Lake Erie and the Great Lakes should be of utmost concern to those in decision making positions on this project. There are many other valid reasons for rejecting the Icebreaker. The OPSB must consider

the future on not only Lake Erie but the impact of allowing this project will have on all the Great Lakes. And wait until offshore turbines reach 600 feet, or more, into the air. OPSB you have the opportunity right now to prevent the industrialization of Lake Erie with offshore wind turbines - do not ignore the right thing to do.

Presently, the LEEDCo website is so far out of date it's ridiculous. Leedco people have never built a wind factory and are novices of the first order and if Lorry Wagner walked away from this project it would die.

The OPSB/PUCO rep Mr. Matt Butler provided this answer to my email question (8-30-17) about the board ever denying a wind project and he answered: *Each wind project that has made it through the entire OSPB process and to the Board for a decision has been approved by the Board, subject to a set of conditions specified by the Board in each decision.* There is little chance the OPSB will deny this project hence, based on past history, the next step will certainly be litigation that will be costly and force this project years down the road and be decided by higher legal authorities.

OPSB/PUCO rep Mr. Matt Butler also responded to my email regarding the Nov. 8, 2017 Cleveland public hearing on the Icebreaker when I asked if any of the 7 voting OPSB members attended the meeting and his answer was NO. Reading the transcript of the hearing minutes I see that Lory Wagner, President of Icebreaker Windpower Inc., didn't bother to attend the hearing either. This to me indicates what a meaningless waste of time this hearing was - another useless hoop for the developer to jump through to make the general public think their opinion makes a difference when in reality it doesn't. Obviously the OPSB decision on the Icebreaker has already been made so why should these people waste their valuable time listening to people rant for 3 hours? *It is our duty to protect our Great Lakes heritage for present and future generations from such gross and unnecessary industrialization.* The Icebreaker is NOT a wind farm – it is a *wind factory* as there is nothing pastoral, bucolic or agrarian about this thievery of the lake views and replaced by industrial machines and we do not wish this despicable action to be propagated throughout the Great Lakes.

The Icebreaker project likely will be voted on soon by the OPSB seven voting members. It's appalling to think that just one vote of the seven that creates a majority could enable this project to exist and begin forever the industrialization of Lake Erie and the Great Lakes and dedicate acres of surface water privatized to the

exclusion of the citizens of Ohio for their enjoyment and use The OPSB should not issue a *Certificate of Environmental Compatibility and Public Need* because the project fails the OPSB Mission Statement as the Icebreaker does not protect the environment nor is there a need for the sparse additional electric power produced.

Is the photo below showing good stewardship of this lake? Lake Erie cannot speak for itself. Native Americans say the turbines violate their religious teachings, which hold the horizon as a sacred meeting place of heaven and earth. Look at the horizon!

OPSB - Do you want Lake Erie to resemble the image below in the future - with turbines dominating the seascape? Where are the birds? Is this what you would like to leave for your grandchildren? If this wind project is built - your grandchildren decades from now will ask - *what were they thinking?*



Respectfully submitted,

Alan Isselhard
8135 North Huron Rd.
Wolcott, NY 14590
Member - Great Lakes Wind Truth

From: [Butler, Matthew](#)
To: [Puco Docketing](#)
Subject: comment for 16-1871
Date: Friday, July 12, 2019 8:19:29 AM

From: Alan Isselhard <speedway2742@gmail.com>
Sent: Thursday, July 11, 2019 7:53:32 PM
To: Butler, Matthew; Alan Isselhard; Mertz, Mary
Subject: Icebreaker offshore Wind Project

July 11, 2019

Dear Ohio Power Siting Board,

Re: Icebreaker Windpower Inc.

Icebreaker Windpower Inc. is essentially Fred Olsen Renewables.

The OPSB and Ohio DNR should be aware that one of the Fred Olsen companies just went bankrupt. (**Fred. Olsen Energy**)

“As repeatedly communicated to the market, the company is insolvent and operating at a loss,” Dolphin Drilling ASA, formerly known as Fred. Olsen Energy, said in a statement released late June 2019.

This is from the web site *Offshore Energy Today* recently:

[Oil driller Dolphin to regroup after \\$1 billion bankruptcy](#)

06/26/2019 | 06:41am EDT

[OSLO \(Reuters\) - Norwegian oil and gas rig operator Dolphin Drilling filed for bankruptcy on Wednesday, leading creditors to seize its key assets in a restructuring that will see the company maintain operations.](#)

[Formerly known as Fred. Olsen Energy, Dolphin Drilling ASA had debt of just over \\$1 billion at the end of 2018 and a net loss for the year of almost \\$300 million \(236 million pounds\), its annual report shows.](#)

If Fred Olsen Energy did this poor of a job managing its oil and gas offshore operation in Europe - then how much different would Fred Olsen do with an offshore wind project in freshwater in Lake Erie in Ohio?

I wonder if this might be why the DOE isn't distributing more millions in grants to the Icebreaker project?

OPSB - Would you trust a company like Fred Olsen with overwhelming

financial problems like these? In view of what's happened to Fred Olsen Energy - would you trust your personal money with a company exhibiting a record like this? **A billion dollars in debt!** If not - then why would OPSB and ODNR members risk Ohio's Lake Erie future with a gamble like the Icebreaker offshore wind project directed by a Fred Olsen company? And you must know that Leedco was in poor financial trouble before they struck gold discovering Fred Olsen and making a business agreement with them.

Have a look at this web site below, its late 2018 news and kind of old now:

<https://www.offshoreenergytoday.com/fred-olsen-energy-to-change-its-name-amid-refinancing-efforts/>

How this bankruptcy impacts Fred Olsen Renewables and Icebreaker is anyone's guess but would it be wise for the OPSB to green light this project Could Icebreaker Windpower Inc. keep all the Icebreaker promises they've made in view of Fred Olsen's "energy" company financial crisis?

Can Icebreaker Windpower Inc. keep all the promised they've made to PUCO and the OPSB when the main player and financial supporter is deeply in debt? Could there possibly be money left for decommissioning the project?

Can't you just see Icebreaker Windpower Inc. changing hands and sold right after the OPSP approves the project? It could for sale right now. Who do you think is the main source of money right now for Icebreaker Windpower Inc.? It's certainly not LEEDCo.

Approving the Icebreaker is a huge gamble for the state of Ohio!

Fred Olsen Renewables - can they be trusted? Fred Olsen will be long gone following another Icebreaker asset sale just like Leedco did when they faced dark financial times and sold their assets to Fred Olsen. This would, of course, happen after the project is approved by the OPSB.

Would Fred Olsen Renewables have the funding to finish the Icebreaker or create another mistake in the lake? I suggest OPSB and ODNR not

take the risk and allow this project to industrialize Lake Erie - forever. Say NO to the Icebreaker.

Sincerely,

Alan Isselhard
8135 North Huron Rd.
Wolcott, NY 14590
member - Great Lakes Wind Truth

Copy to Ohio DNR

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Summary: Public Comment (2) received via website electronically filed by Docketing Staff on behalf of Docketing.