na pa Platform Against Windpower

COMMENT SUBMISSION TO: MR. ROAK PARKER, MR. JOE KRAWCZYK

Attention Mr. Roak Parker DOE Golden Field Office NEPA Division 15013 Denver West Parkway Golden CO 80401 RE: EA 2045, Icebreaker Windpower, Inc. Email: <u>ProjectIcebreaker@ee.doe.gov</u>

ATTN: Mr. Joseph W. Krawczyk Buffalo District U.S. Army Corps of Engineers Regulatory Branch 1776 Niagara Street Buffalo, NY 14207 Re: Project Number 2010-00223, Icebreaker Windpower, Inc. Email: joseph.w.krawcyk@usace.army.mil

October 6, 2017

Icebreaker 16-1871-EL-BGN (OPSB)

Projecticebreaker@ee.doe.gov

C.c. DOE, Liz Hartman, Matt Butler, OPSB, Chair Azim Haque, Joe Krawcyk, NAM CEO Jay Timmons, Secretary Rick Perry

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Andrea Defelice for delivery to NAM and CEO Jay Timmons adefelice@nam.org

C.c. Interested parties

Mr. Butler, kindly distribute to Board

Dear Mr. Parker and Mr. Krawczyk,

Please accept our comments regarding the ongoing renumbered project, Icebreaker, 16-1871 EL BGN.

We respectfully again request that all comments from the prior LEEDCo application be reactivated, and applied to the current proposal, as none to our knowledge are completed, and *this is the same project*. Changing a file number and the foundation style do not materially alter the project. Neither do changing the consulting or buildout relationships, nor the purchase of the project by a multinational.

We reflect firstly on the magnitude of the investigations and considerations put to LEEDCo in 2014. These have not been met. We now add concerns about conflict of interest issues (obvious to many, as <u>elected officials and corporate</u> <u>leaders of the area</u> may have to declare pecuniary interest), and lack of

accountability, because the DOE has advanced some or whole of forty million dollars (\$40,000,000) or forty-seven million dollars (\$47,000,000), tax payers' dollars, without open accounting to the people. It is widely understood that ultimately the proposed project would cost upwards of one hundred twenty-five million dollars (\$125,000,000).

http://dis.puc.state.oh.us/TiffToPDf/A1001001A14D08B40446H93651.pdf

With respect to possible conflict of interest issues, we reflect on several legal cases now before the courts where improper influence has apparently occurred between elected officials and wind development companies. One example:

As reported on July 16, 2008 by Wall Street Journal:

"New York Attorney General Andrew Cuomo has opened a probe of two companies that develop and operate wind farms over allegations of improper dealings with public officials and anticompetitive behavior. Mr. Cuomo said his office has subpoenaed First Wind -- formerly UPC Wind -and Noble Environmental Power LLC, which has filed with the Securities and Exchange ..."

http://online.wsj.com/news/articles/SB121617758961057329

We anticipate that the proper questions to the Board of LEEDCo regarding possible COI would be on file and be able to be referenced by the public. Governor Cuomo's investigation resulted in a Code of Conduct, which we are sure you are aware of: *First Wind also owns a project in Ohio*. While we are not obviously insinuating any COI, it would in this important instance be reassuring to the public to know if Code of Conduct compliance has been tested and used.

<u>The Wind Industry Ethics Code</u> is a result of the Attorney General's investigation into, among other things, whether companies developing wind farms improperly sought land-use agreements with citizens and public officials, and whether improper benefits were given to public officials to influence their official actions relating to wind farm development. Both Noble and First Wind fully cooperated in the inquiry and their assistance was instrumental in developing the Code of Conduct that is being announced today.

The Attorney General's Wind Industry Ethics Code prohibits conflicts of interest between municipal officials and wind companies and establishes vast new public disclosure requirements. The Code:

Bans wind companies from hiring municipal employees or their relatives, giving gifts of more than \$10 during a one-year period, or providing any other form of compensation that is contingent on any action before a municipal agency

Prevents wind companies from soliciting, using, or knowingly receiving confidential information acquired by a municipal officer in the course of his or her officials duties

Requires wind companies to establish and maintain a public Web site to disclose the names of all municipal officers or their relatives who have a financial stake in wind farm development

Requires wind companies to submit in writing to the municipal clerk for public inspection and to publish in the local newspaper the nature and scope of the municipal officer's financial interest

Mandates that all wind easements and leases be in writing and filed with the County Clerk

Dictates that within thirty days of signing the Wind Industry Ethics Code, companies must conduct a seminar for employees about identifying and preventing conflicts of interest when working with municipal employees We wrote to you, Mr. Parker, <u>in October of 2016</u>, indicating that the deficiencies noted by then OPSB Chairman Snitchler, had not yet to our view, been satisfied.

"We respectfully remind the DOE of just some of those inaccuracies and deficiencies:

"Chairman Snitchler and the Ohio Power Siting Board (OPSB) yesterday presented LEEDCo (Lake Erie Energy Development Corporation) with a daunting TO DO list of insufficiencies, omissions, and errors in its application for 6-9 industrial wind turbines about 7 miles off the shore of Cleveland.

The omissions include a formidable 14 item list, see partial list below.

- Ecological impacts studies for during construction and during operation
- Ice throw. Describe the potential impact from ice throw at the nearest properly boundary, including commercial and recreational uses of Lake Erie (i.e., fishing, shipping, military exercises, boating, swimming/diving, etc.), and the Applicant's plans to minimize potential impacts, if warranted (OUR NOTE: the industry itself admits that ice throw mitigation and control has not met with uniform results and that more study is needed)
- Noise. Indicate the location of any noise-sensitive areas within onemile of the proposed facility. Conduct studies and provide results that indicate negligible noise impacts to aquatic species
- An up to 10-year survey of projected population within 5 miles of the project site (which includes transmission lines and substations) "The applicant shall provide existing and ten-year projected population estimates for communities within five miles of the proposed project area site(s)."
- Studies of the technical data needed for lakebed topography and geography

• Traffic impact studies during construction and maintenance

Additionally, noted in the letter to you:

"Additional serious omissions or errors were noted in the environmental review materials provided by Kerlinger and Associates on behalf of LEEDCo. Letters from ODNR and FWS indicate numerous "Contradictions, biases, omissions, and minimal assessments."

Points 19 and 20 relate to the unscientific, biased, and facile studies given to the OPSB by LEEDCo.

19. The boat surveys monitoring birds appear to be biased relative to the results provided through the acoustic surveys.

20. It was suggested that risks to birds migrating in the project area were minimal. Based on the pelagic bird surveys conducted by the Division of Wildlife during 2011 and 2012, the results suggest that the area proposed is within areas of larger numbers of ring-billed and herring gulls. Both migrating water birds and waterfowl may be impacted by this wind facility through direct impact as well as displacement.

Members of the Great Lakes Wind Truth group as well as NA-PAW, point to the fact that there are tens of millions of migrating birds and bats, possibly billions, that would be seriously impacted by even 6-9 industrial wind turbines proposed for near Cleveland. The Hawk Migration Association of North America and Rick Unger, past president and current advisor, of the Lake Erie Charter Boat Association, also expressed concerns to the OPSB."

In examining the <u>DOE draft EA</u>, we find the following.

The DOE, as lead coordinator for this project, must under the NEPA:

 require that DOE consider the potential environmental impacts of a proposed action. This requirement applies to DOE's decisions about whether to provide federal funding through financial assistance agreements.

In compliance with these regulations, this Draft Environmental Assessment (EA):

• Examines the potential environmental impacts of the Proposed Action and the No-Action Alternative;

 Identifies unavoidable adverse environmental impacts of the Proposed Action;

• Describes the relationship between local short-term uses of the human environment and the maintenance and enhancement of long-term productivity; and

• Characterizes any irreversible and irretrievable commitments of resources (our emphasis) that would be involved should DOE decide to implement its Proposed Action.

DOE must meet these requirements before making a final decision to proceed with any proposed federal action that could cause adverse impacts to human health or the environment. (Our emphasis)

Respectfully, we are firmly of the understanding that the impacts to human health and/or the environment, will be serious. We also firmly believe that there will be irreversible and wasteful commitments of resources. Forty million dollars (\$40,000,000) or forty-seven million (\$47,000,000) is massive funding for six turbines, a few construction jobs, and a continual drain on rate payers, as even more appears to be committed to this demonstration project. (The project is expected to reach expenses to taxpayers of perhaps one hundred and twenty-five million (\$125,000,000) Do the math: six turbines, with a total cost of one hundred twenty-five million (\$125,0000,000). Twenty million, eight hundred thousand dollars (\$20,800,000) per turbine. Accelerated hydro costs: lower business productivity: net loss to all.

We also question the purchase or ongoing business arrangement with Fred Olsen Renewables, and cannot locate a cost benefit study. Are the US taxpayers then, obliged to be on the hook for a costly, very costly, experiment that will largely use <u>outsourced parts (blades and shafts and other</u> <u>components)</u>, and additionally ask Ohioans to pay more for being part of the <u>"power pledge</u>," yet another misguided and misinformed promotion? It is incredulous that this represents outright grants that we are asking Ohioans to pay, and additional ongoing subsidies to an offshore company. Where are the profits going? These are questions that we believe have been asked of your office, the developer, and the OPSB, with no adequate response. Again, respectfully, we submit that there will be no long-term gain on productivity. There will be long term recouping, and financial recovery and for the environment, a very long and serious impact.

Please note the <u>\$200 million and more, that GE is investing in Pune, India</u>.

"GE aims to build more than half-a-billion dollars worth products for power, wind energy, and oil & gas from the new factory in the first phase. About half of the output at Pune will be exported. And along with those products, the expertise gathered from Pune will be shared with the rest of the world."

So much for "made in America." The chimera of "supply chain" economic benefits to Ohio and the misleading interpretation that the LEEDCo project will lead to massive upsides for Ohio manufacturing, is just that. A promise that cannot be achieved, as GE and other manufacturers are very busy creating "hubs" for their endeavors internationally, outsourcing. The jobs' myths are attached in our recent letter to the NAM (National Association of Manufacturing). Any jobs would be temporary construction related, with very few subsidiary and long term, as at <u>Block Island.</u>

For these reasons alone, the project must be seen to fail the benchmarks of achieving public trust, and efficacy.

DOE's "purpose and need" reflects in the EA on again, some unproven theoretical, and false premises: that "offshore wind can help the nation reduce its greenhouse gas emissions, and diversify energy supply." It promises also to stimulate certain sectors of the economy, and to "lift uncertainties" with respect to deployment of US offshore wind.

The "uncertainties" regarding offshore wind have already been registered internationally. It is costly, damaging to waters, aquatic species and sea mammals, birds, bats, and wreaking one could say, havoc, generally. If your neighbor has purchased a car some years back, which is a gas guzzler, and kills while on the road, and travels comparatively like a snail, are you likely to run out and purchase this same vehicle? European experiments in offshore, and on shore, have proven disastrous, and have ended up requiring more coal, more gas, more nuclear. There have been zero reductions in C02 for example, in Europe, since the advent of industrial wind. Zero. In an article posted October 4th, 2017, reflecting on the failed wind and solar experiments in Germany, and a chaotic and likely to fail new government, on several issues, the author declares "Germany's love affair with wind and solar has clearly turned sour."

"During the winter just gone, with a total collapse in wind and solar power output, Germany had to scramble to keep its lights on using coal-fired power plants, resurrected to deal with a grid on the brink of collapse and nuclear power imported from France..... And now that the victims realise that the whole thing is an enormous fraud, the political tide has turned."

In a paper published by <u>the Brookings Institute</u>, entitled, "Why the Best Path to a Low-carbon Future is not in Wind and Solar Power," the research shows that

"more than six solar plants and four wind plants are required to produce the same output with the same degree of reliability as a coal-fired plant of the same capacity. In the paper we estimate that at least 7.3 solar plants and 4.3 wind plants are required to produce the same amount of power with the same reliability as a coal-fired plant.

By way of contrast, a new low-carbon gas combined cycle or nuclear plant can operate also at 90 percent of full capacity and can replace a coal-fired plant on a one-to-one basis. A hydro plant with storage can operate at 100 percent capacity during peak periods and more than 40 percent during non-peak periods. In dollar terms, it takes a \$29 million investment in solar capacity, and \$10 million in wind capacity, to produce the same amount of electricity with the same reliability as a \$1 million investment in gas combined cycle capacity.

Mr. Robert Bryce wrote a piece in <u>Forbes magazine which featured research by</u> <u>BENTEK</u>, which proved again, that industry claims of emissions reductions are wildly exaggerated, and that without subsidies, this business model is a stellar failure. "

Mr. Bryce suggests that the BENTEK study should be studied by all policy makers. We agree. We further point to international experiments with wind turbines that are failing. Please note the links appended.

James Delingpole goes further: "Once those taxpayer funds are withdrawn, the real economics of maintaining these expensive monstrosities are so overpoweringly negative that they are left to rot — skeletons proving the fraud and deceit of the whole global warming meme." He warns that wind factories are Ponzi schemes, and not commercially viable at all. Anywhere.

We seriously question this project's worth, given the mandate by the DOE and NEPA. There is no purpose, no "need" for the LEEDCo, Fred Olsen project.

QUESTIONS ARISING FROM THE DRAFT EA LEEDCO.

The mono bucket design described in some detail in the EA, requires more study. According to <u>BOEM (Bureau of Safety and Environmental Enforcement)</u>,

(August, 2016, Virginia)

"The acceptable performance of this foundation concept for OWT has not yet been fully demonstrated due to limited number of studies (both numerical and experimental) and case histories. To make suction bucket foundations attractive for offshore wind applications, additional information is required to demonstrate their feasibility, particularly with respect to the effect of cyclic loading and potential soil stiffness and strength degradation on the dynamic response of these systems. To this end, this study presents the results from advanced numerical analyses performed for a selected idealized cases to provide insight regarding the cyclic response of OWT founded on suction bucket foundations." Has an in-depth soil comparison and mono bucket study been conducted? If so, what are the results? The Bureau indicates that studies must be done on a case by case study.

"Specifically, Section 7.4.4 requires that the effects of cyclic loading on soil properties be considered in foundation design, emphasizing that the concern relates to the effect of cyclic degradation of soil properties (i.e., both stiffness and strength). This section goes on to explain that cyclic loading may lead to an increase in pore pressure, accompanied with large permanent shear strains and reductions in soil shear strength. Also, the assessment of permanent foundation rotations. In the SLS design condition, soil's shear modulus degradation due to cyclic loading shall be accounted for when calculating the foundation's performance (fundamental vibration frequency, settlement, and lateral displacement)."

The few international references to mono bucket installations are in Germany, DK, and the UK. *LEEDCo is referenced as a lake install, with also reference to heavy or significant anticipated icing factors.*

Table 2.6-1: OWT Projects with Suction Bucket Foundation ProjectLocation

Bureau of Safety ar Project No. 04.7616		ntal Enforce	ement						
2.6 WIND T	URBINE PR	ROJECTS	S USING S		BUCKET FO	DUNDATIONS			
Table 2.	.6-1 provide	es a list o	of offshore	wind turbi	ne projects	with suction bucket foundations			
						20 m) and multi-bucket foundation			
						d between 12 m to 18 m with the Borkum Riffgrund 1 wind farm in			
						jority of the projects are located in			
Europe (i.e., Ge	ermany, Der	nmark and	d the UK),	, whereas t	here is only	one project in the United States			
which will be co	instructed in	a lake ra	ather than	a sea or oc	ean enviro	nment.			
	Table 2	6-1: OW	T Project	te with Su	tion Buck	et Foundation			
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Project	Location	Water	Found		Soll	General Observation	1		
Project	Location	Water Depth				General Observation			
	Denmark,	Depth	Type Mono-	Dimension D=12 m	Soil	General Observation 3.0 MW Prototype. Installed in ~4 m of			
Project Frederikshavn	Denmark, 2002	Depth	Type Mono- Bucket	dation Dimension D=12 m L=6 m		General Observation 3.0 MW Prototype. Installed in ~4 m of water. Instrumented with details presented in Liingaard (2006).			
	Denmark, 2002 Germany,	Depth 1~4 m	Type Mono- Bucket Mono-	Dimension D=12 m L=6 m D=16 m	Soil	General Observation 3.0 MW Prototype. Installed in ~4 m of water. Instrumented with details presented in Liingaard (2006). 4.5 MW. Hit by barge during			
Frederikshavn	Denmark, 2002 Germany, 2005	Depth 1~4 m ~18 m	Type Mono- Bucket	dation Dimension D=12 m L=6 m	Soil Clay Sand	General Observation 3.0 MW Prototype. Installed in ~4 m of water. Instrumented with details presented in Liingaard (2006).			
Frederikshavn Wilhelmshaven	Denmark, 2002 Germany, 2005	Depth 1~4 m ~18 m	Type Mono- Bucket Mono- Bucket Mono- Bucket	dation Dimension D=12 m L=6 m D=16 m L=15 m D=12 m L=6 m	Soil	General Observation 3.0 MW Prototype. Installed in ~4 m of water. Instrumented with details presented in Lingaard (2006). 4.5 MW. Hi by barge during installation and failed due to buckling.	-		
Frederikshavn Wilhelmshaven Horns Rev 2	Denmark, 2002 Germany, 2005 Denmark,	Depth 1~4 m ~18 m 9~17 m	Type Mono- Bucket Mono- Bucket Mono- Bucket Mono-	Dation D=12 m L=6 m D=12 m L=15 m D=12 m L=6 m D=12 m L=6 m	Soil Clay Sand	General Observation 3.0 MW Prototype. Installed in ~4 m of water. Instrumented with details presented in Lingaard (2006). 4.5 MW. Hit by barge during installation and failed due to buckling. Total Height: 38 m. Weight: 165 tones.	-		
Frederikshavn Wilhelmshaven Horns Rev 2 Met Mast	Denmark, 2002 Germany, 2005 Denmark, 2009	Depth 1~4 m ~18 m 9~17 m ~18 m	Type Mono- Bucket Mono- Bucket Mono- Bucket	dation Dimension D=12 m L=6 m D=16 m L=15 m D=12 m L=6 m	Soil Clay Sand Interlayer	General Observation 3.0 MW Prototype. Installed in ~4 m of water. Instrumented with details presented in Lingaard (2006). 4.5 MW. Hit by barge during installation and failed due to buckling. Total Height: 165 tones. Decommissioned in 2015.	-		
Frederikshavn Wilhelmshaven Horns Rev 2 Met Mast Dogger Bank Borkum	Denmark, 2002 Germany, 2005 Denmark, 2009 UK, 2013 Germany, 2014	Depth 1~4 m ~18 m 9~17 m ~18 m	Type Mono- Bucket Mono- Bucket Mono- Bucket Tripod	Dation D=12 m L=6 m D=16 m L=15 m D=12 m L=6 m D=14 m L=8 m D=8 m L=8 m	Soll Clay Sand Interlayer unknown	General Observation 3.0 MW Prototype. Installed in ~4 m of water. Instrumented with details presented h Lingaard (2006). 4.5 MW. Hit by barge during installation and failed due to buckling. Total Height: 165 tones. Decommissioned in 2015. Met mast. 3.6 MW Turbines Not yet constructed. Six, 3 MW	-		
Frederikshavn Wilhelmshaven Horns Rev 2 Met Mast Dogger Bank Borkum	Denmark, 2002 Germany, 2005 Denmark, 2009 UK, 2013 Germany,	Depth 1~4 m ~18 m 9~17 m ~18 m -25 m	Type Mono- Bucket Mono- Bucket Mono- Bucket	Dimension D=12 m L=6 m D=12 m L=6 m D=12 m L=6 m D=14 m L=8 m D=8 m	Soll Clay Sand Interlayer unknown	General Observation 3.0 MW Prototype. Installed in ~4 m of water. Instrumented with details presented in Lingaard (2006). 4.5 MW. Hit by barge during installation and failed due to buckling. Total Height: 38 m. Weight: 165 tones. Decommissioned in 2015. Met mast. 3.6 MW Turbines	-		

Please note the Wilhemshaven German install in 2005, 4.5 MW turbine hit by a barge during installation and failed due to buckling. Please also note that leading edge blade producer, Siemens, has had on and offshore blade issues: Will this be of concern with the LEEDCo project, given that icy conditions are expected and routine? Who will monitor and pay for maintenance? The EA mentions in detail: maintenance, and accidental spills;

"No oils or other waste would be intentionally discharged during service events. Appropriate measures would be implemented to provide for containment and collection of hazardous material spills (oil, fuels, hydraulic fluids, and lubricants) should they occur."

Where is the list of "appropriate measures"? We assure you, these accidents do occur. With frequency, and widespread underreporting. Blade and gear box failures, fires, fatigue of turbine shafts, collapses, ice throw, compromised worker safety and deaths, and oil and lubricant spills. Again, underreported.

<u>"Bloomberg reports</u> on wind turbines in Mexico leaking "a copper-colored lubricant" that "contaminated soil," smelled of "burned fuel or ammonia," and made trees glisten with oil: Wind turbines were planted along a strip of Mexico's southern coast to make the country's power industry cleaner. Now they're spilling oil. In the town of Juchitan last month, a clean-up was under way around a generator owned by Electricite de France. Workers wearing goggles and masks were scrubbing off a copper-colored lubricant that dripped down from the turbine. They'd wrapped cloth around its base, to absorb further leakage, and stuffed contaminated soil and stones into plastic trash-bags.... "The stench was terrible, like a sort of burned fuel or ammonia," she said, asking not to be identified by her surname out of concern over reprisals. "The trees were glistening with oil." Similar problems have been reported all along the Tehuantepec isthmus, one of the western hemisphere's windiest places."



Trash bags with contaminated rocks sit below an oil drenched turbine tower.

Again, who would pay for the maintenance, and accidental fatigue or damage? Who will pay for unintended oil spills, leakage? Who will monitor for these leaks?

Problems at Siemens, on and offshore:

The German manufacturer said it was impacted by EUR 223 million in charges for repairing blades on both offshore and onshore turbines, as well as inspecting and replacing main bearings in onshore turbines.

Head of the Siemens energy business Lisa Davis said that the blade degradation was due to "harsh weather conditions both onshore and offshore". She added that Siemens has "implemented a design change for leading edge protection" for new blades and will be implementing a "similar retrofit" for existing blades.

••••

Blade breakages on a number of onshore turbines last year caused the curtailment of 700 turbines worldwide. And in 2010, the company was forced to carry out maintenance work on four offshore wind farms after it was discovered the bearings in the 3.6MW turbines' were corroding.

DRINKING WATER SUPPLY AND QUALITY

<u>The document from Limno Tech</u> by Ric McCulloch, Jeremy Grush, Ed Verhamme, on behalf of a company that often works for the wind industry, indicates:

To limit potential impacts to the water intakes during cable installation, LEEDCo would work with the selected cable installation contractors to monitor and mitigate the amount of suspended sediment during cable installation. This would include careful review of selected contractor's equipment and installation method, initial monitoring of cable installation to ensure minimal impact, and adjustments to installation speed or jet pressure to limit suspension. LEEDCo would continue discussions with the City of Cleveland and develop a communications and monitoring plan that would inform plant operators of construction schedule and provide field measurements of turbidity to optimize water treatment plant operation (as would occur under regular operating conditions during storm events). These precautions and mitigation measures would greatly reduce the potential for any negative impacts on drinking water supply.

We do not consider "*reducing* the potential negative impacts" on drinking water, to be any kind of acceptable solution. Even one dispersal of the toxic elements at the lake bottom could be extremely serious. Regrettably, there appears to be imminent danger.

The EPA confirms that in sediment tests conducted in June 2016, in an area of about three miles offshore from Cleveland's East Side, and also at intervals extending to eight to nine miles from shore, elevated levels of PCBs and PAHs. Some suggest this drift is towards the Nottingham Intake Station, which is connected to all other intake facilities. Why a development such as the LEEDCo "demonstration" project would be considered, when fresh water is at such a world level premium, is mysterious. <u>USGS (US Geological Surveys)</u> indicate contaminates such as:

polychlorinated biphenyls and mercury in aquatic bed sediments throughout the Great Lakes Basin have resulted in a need for better understanding of the scope and severity of the problem. Various organochlorine pesticides, polychlorinated biphenyls, trace metals, and polycyclic aromatic hydrocarbons are a concern because of their ability to persist and accumulate in aquatic sediments and their association with adverse aquatic biological effects. The areal distribution and concentrations in surficial bed sediments of 20 contaminants of concern with established bed-sediment-toxicity quidelines were examined in relation to their potential effects on freshwater aquatic biota. Contaminants at more than 800 sampling locations are characterized in this report. Surficial bed-sediment-quality data collected from 1990 to 1997 in the Lake Erie/Lake Saint Clair Drainages were evaluated to reflect recent conditions. In descending order, concentrations of total polycyclic aromatic hydrocarbons, phenanthrene, total polychlorinated biphenyls, chrysene, benz[a]anthracene, benzo[a]pyrene, cadmium, lead, zinc, arsenic, and mercury were the contaminants that most commonly exceeded levels associated with probable adverse effects on aquatic benthic organisms.

Restoration of the Cuyahoga River Area of Concern has been onerous, and inspiring. In an EPA document signed by Governor Kasich and Ohio EPA director, Craig Butler, <u>within a chart of impaired fish and wildlife vibrancy</u>, Beneficial Use Impairments, are lists of deficiencies or impairments for: Ashtabula, Black, Cuyahoga, Maumee: restrictions on fish consumptions all; degradation of fish populations all; fish tumors or other deformities, with Black River system in Recovery; degradation of benthos; restrictions on dredging activities; Beach Closings, except for Ashtabula; Eutrophication, only Ashtabula not impaired; degradation of aesthetics, except for Ashtabula; Loss of fish habitat, all.

<u>Mercury mapping</u> of Great Lakes concentrations shows Lake Erie with the highest levels of all the Lakes. "Mercury concentrations appear to have either stopped decreasing or **begun increasing** in most species under study, including Walleye, Smallmouth Bass, Yellow Perch and White Bass."

Mercury does not biodegrade, and bio accumulates as it travels through the food chain. Impacts are devastating."Concentrations can be magnified by one to 10 million times in fish eating birds such as loons, lowering growth and reproductive success." Note that <u>accumulations in fish in Lake Erie</u> do not appear to be diminishing, but rather increasing, although the cause for the increase is yet unknown. (There are hundreds of known contaminants already noted in the Lakes.)

"Mercury concentrations can be magnified by 1 million to 10 million times in fish and fish-eating birds like loons, reducing their growth and reproductive success."

<u>The MOU on Aquatic impacts</u> directs that in five years, if conditions require mitigation or if the project demonstrates significant adverse impacts, studies may CONTINUE for an additional period, to collect more sampling! It also states that the parties themselves will decide on which kind of monitoring. This kind of bringing the waggons around the problem, instead of making the potential harm disappear, appears bizarre. Again, the evidence for precaution is abundant. Pre-construction studies (and post) are meaningless when conducted by industry shills, paid for by the industry. We know from experience how cloudy the voluntary testing results are from bird and bat impacts, far from independently conducted and designed, and when exposed or in non-compliance. It is an industry operating in collusion with policy makers, and with zero accountability. There is ample and sadly accruing

evidence world wide of a kind of wind turbine natural world genocide. How this can be ignored any longer, with evidence that is mountainous, is deeply troubling. Jim Wiegand, wind energy and wildlife expert, writes in <u>Master</u> <u>Resource</u>:

"The wind industry is ... producing faulty, misleading and even fraudulent documents to hide the serious and growing mortality. This situation has continued for years but has been shielded by state and federal agencies and other supporters of wind power."

A "green energy" wildlife genocide is depopulating wildlife habitats across the world where vital species once found refuge. Industrial wind turbines have invaded these habitats and are devastating bird and bat species.

Rather than avoiding these critical habitats or taking steps to minimize impacts on important species, the heavily subsidized wind industry is responding by producing faulty, misleading and even fraudulent documents to hide the serious and growing mortality. This situation has continued for years but has been shielded by state and federal agencies and other supporters of wind power.

"The Fish and Aquatic Impacts MOU" indicates some of the posting as scientific gathering of data, but which really shows to our view, complete lack of in-depth, careful study. *Without going into great detail concerning the limited and scant testing, aquatic species experts LIMNO indicates three tenminute tows, once each month in May, August and October, for juvenile fish, as one example.*

"Benthos sampling will take place once a month in May OR June, and ONCE in September or October." This is scarcely a detailed and sincere effort.

THE BIRD AND BAT MOU's

The MOU professes it will offer "rigorous" and "scientific" agreed on study on impacts. It says it will monitor existing conditions, and changing conditions, and patterns of use of the habitat. It will develop mitigation and adaptive strategies, and help us to understand better what offshore impacts are and will be.

Western EcoSystems Technology is the selected consulting group. This group is hardly neutral or objective and is not new to the wind industry's interests. The MP (Monitoring Plan), they say is a "living document" that will guide avian and bat monitoring for the Project. Again, the MOU can be extended, upon finding higher than expected mortality, or damages that need to be mitigated, and that terms of agreement and types of sampling will be discussed and agreed on between the parties.

Both of the MOUs appear to be expecting unacceptable results. Again, a <u>sample post construction study</u> by Western Ecosystem 2012 in Maryland, shows scant sample methods, a mere 40-50 meters, at 50% of the turbines.

Wildlife and raptor/wind energy specialist Jim Wiegand points out the inherent flaws of such a narrow sample study. Birds are often flung far beyond 50 meters, and often are injured and left to die elsewhere. Bats may often be found below the turbine wing span, but again, as Western EcoSystems admits, most of these are scavenged before they enter the count, which in itself is minimal in time and geography, we would say, "designed to be blind." Mr. Gordon indicates that he is a bird lover, and that there are very few birds that venture out to the project site. "We're in a zone where there's not many waterfowl out there," Gordon said. This statement is patently false and in stark contrast to evidence of the well-known bird, waterfowl included, abundance, sheer abundance, on the shores and offshore of Lake Erie. Ducks Unlimited, the world leader in wetlands conservation, points to Ohio as having one of the largest concentration of wetlands organizations in North America. "....400 bird species have been documented in this region. Visiting birders travel to this region of northwest Ohio. Lake Erie marshes make up the largest stopover habitats in the eastern United States between coastal habitats and northern breeding areas." "On a single aerial survey done on November 16 of this year, 201,016 water birds were counted, including ducks, geese, swans, cormorants and eagles, all within the offshore waters of western Lake Erie."

"These high numbers are very significant, and create an entirely different scenario than those given in this project's contrived bird surveys." (Jim Wiegand, <u>letter to DOE, 2016</u>)

Additional quotes by Jim Wiegand in a letter to the DOE in 2016.

"As an expert on wildlife and wind turbine mortality impacts, I can safely say that **hundreds of massive wind turbines on Lake Erie will have a tremendous impact on these species, easily killing tens of thousands of birds annually**.

This estimate of mortality to birds is no stretch of the imagination when one considers that the poorly sited McCormick Convention Center located on Lake Michigan has been killing over 1000 birds annually for decades. Major contributing factors for this mortality are high concentrations of birds at this location and poor visibility causing birds to fly low into this building. Wind Turbines on Lake Erie will create far more carnage by actually attracting birds to these locations by putting low altitude flight patterns of birds in times of low visibility, right into the devastating rotor sweep of these spinning turbines.

I I also find it odd that I am making these comments to the Department of Energy, an agency that does not normally deal with wind turbine wildlife impacts. As a result, I want to caution the Department of Energy about getting expert opinions from the Interior Department and wind industry research. The problem this poses is that neither of these entities are qualified to give opinions because together they have been producing fraudulent wind industry research that has been used to hide the majority of wind turbine related mortality impacts since 1985." Please read the rest of this important submission here: <u>http://greatlakeswindtruth.org/cleveland-leedco/letters-to-the-doe-and-opsb-re-leedco/jim-wiegand-wind-energy-and-wildlife-expert-submission-to-doe/</u>

As Mr. Wiegand mentions, it is well understood now, that <u>bats are attracted to</u> <u>turbines</u>, as sources of food, and as possible nesting areas.

Bat activity was higher around the wind turbine towers than along nearby forest edges and around the open-structured meteorological masts. These differences suggest that bats are attracted to the turbine towers. Most likely the bats forage on the large insect assemblies that some nights congregate on the turbine towers.

It is now known also that bats are offshore more than previously thought, also for attractions to the masts, and insect accumulation. The first recorded flight of a bat between the UK and the mainland was greeted with great wonder.

"The amazing finding that a tiny Nathusius' pipistrelle Pipistrellus nathusii completed a 596km journey from Bristol to the Netherlands is proof that bats do successfully migrate across the North Sea."

And...." it's not just migrations that need to be considered as there is also evidence that non-migratory bats can fly offshore to forage on insects blown out to sea."

Needless to say, the implications for offshore wind are huge.

Another wind energy and raptor specialist, Mark Duchamp of Spain, President of Save the Eagles International, wrote recently to NA-PAW in an email:

"Western EcoSystems are not acceptable. They are practically married to the wind industry. Consultants should not be hired by the promoter: This is a clear conflict of interest. They should bear the approval of opponents to the Project.

Post construction monitoring is useless: there are no mitigation measures capable of stopping birds from being slaughtered once the Project is built and the blades are turning.

Eagles, ospreys and hawks will be attracted to the turbines in the water and will be massacred. Ditto with bats.

The bird impact study does not consider these species. (or are there other studies planned for them?)

All bird societies as well as USFWS state in their guidelines that migration routes should be avoided.

So this Project should be abandoned by virtue of the precautionary principle. No amount of flight pattern studies can obviate the risk."

Locally, residents and birding agencies along with BSBO (Black Swamp Bird Observatory) and ABC (American Bird Conservancy), have successfully fended off another prototype or demonstration proposed project, a single turbine at Camp Perry. Congresswoman Marcy Kaptur, 9th Congressional District, had been a promoter of this prototype turbine that would certainly seriously have put at risk Lake Erie's marshland, putting ducks and geese at risk, and as some note, would begin the slippery slope of endangering an entire eco system, rich and abundant in bird and bat life. The endangered migratory songbird, the Kirtland Warbler, would also have been at risk. Gildo Tori, director of public policy for Ducks Unlimited Great Lakes, notes the huge concentrations of private waterfowl hunting clubs in the U.S. Mark Shieldcastle of Black Swamp Bird Observatory noted, "If we lose this one, there is no stopping it." LEEDCo also purports a mission of "demonstrating" a turbine installation in the middle of one of the world's most abundant biodiverse migration routes. Many have called this, along with the Camp Perry turbine proposal, ludicrous, or shameful.

The <u>world has also noted the migratory sanctity</u> of the area, and has worked over years now to comment to the OPSB, DOE and other policy makers to abort any, and the LEEDCo, turbine development.

WIDESPREAD CONCERN

<u>Outrage about this project</u> has been registered internationally. Deputy Mayor of Learnington, Ontario, Charlie Wright, wrote two years ago that this project will be "an unmitigated disaster."

"I have never heard of anything so entirely crazy as putting wind turbines in Lake Erie. You have heard me say I would lie across a road in front of trucks bringing them to the Western Basin of Lake Erie. I am saying now that a blatant environmental catastrophe is about to happen. Do not allow the LEEDCo project to proceed. "Incubator!" That means birthing more? You have to be kidding. Not One." He adds, "I hope they don't blow all that money. Because it will also be an enormous financial failure."

More than a hundred more signatories and environmental groups added their endorsement of the letter in an addendum. The Hawk Migration Association of North America, HMANA, additionally wrote of concerns of the improper siting of the project in the well-known migration routes of the Lakes. *You can consider that the original signatories to letters addressed to the OPSB in 2014 are still active on this letter. This would number in the millions of interested persons, agencies and groups in the hundreds, from Spain, Germany, Denmark, Ireland, the UK, Slovenia, Australia, and many more. Some of these letters can be viewed on* <u>Great Lakes Wind Truth.</u> *Needless to say, signatories also include residents and groups from Ohio, New York, Michigan, and Ontario, Canada.* The DOE has the responsibility of fielding the project, determining if a "No Action" approach has more merit. It is challenged with the LEEDCo expressed and USACE defined mandate of:

- Serving electrical needs of consumers
- Reducing air pollution
- Reducing greenhouse gas emissions
- And, creating local jobs and spurring economic development.

We respectfully suggest that **none of these objectives can or will be met** with the "demonstration" project. As noted, air pollution is not mitigated by industrial wind developments, or "minimally," as some say, anywhere. This idea of mitigating pollution, is one of the cornerstone myths of the industry. The highly toxic production of rare earth elements in China, used in the magnets of turbines, with excessive air and water pollution, often causing death for Chinese people, and human health degradation of the most horrific kind, needs to be factored as well. Take also into consideration, production, transportation, maintenance of this fossil fuel driven adventure, and there is a negative impact to air and water, universally. Count in the cement, oil and lubricants, up to 800 gallons per turbine, heavy equipment to install, maintain, clean, and decommission, attendant air pollution, the 100% back up, gas plants that need to sit idle and then quickly re fire as required: a net loss to the environment and air, certainly. Zero net gain.

Professor Ross McKitrick of Guelph University and the esteemed Fraser Institute, has studied Ontario's kind of feverish desire to combat the PM2.5: This is the most talked about emission with respect to health concerns. These are "ultra-fine particles smaller than 2.5 microns in diameter."

In a spirited discussion of the hysteria and mythology around this tiny particulate, McKitrick compares the dusty roads of Ontario and wood burning

fireplaces, to the amount produced by two now closed coal fired plants. People often hear McKitrick refer to the question: if air pollution is killing so many, where are the bodies?"

Ontario's coal-fired power plants released 699 tonnes of PM2.5 in 2009. Is that a lot? One way to tell is to compare it with another source nobody worries about: residential wood fireplaces. According to the same Environment Canada emissions inventory, Ontario residential wood-burning fireplaces released 1,150 tonnes of PM2.5 in 2009, **65% more than all the coal-fired electricity generation together.** (Our emphasis)

That does not mean Ontario has a crisis of air pollution from wood fires. It means PM2.5 emissions from coal-fired power plants are at levels well below what is considered not a problem when coming from other, more picturesque sources.

McKitrick goes on to explain:

If (numbers of hospital admissions and deaths) are correct, they imply that woodburning fireplaces cause 520 deaths per year, etc. But that is nothing compared with the implied effects from people driving on unpaved roads. According to Environment Canada, dust from unpaved roads in Ontario puts a whopping 90,116 tonnes of PM2.5 into our air each year, nearly 130 times the amount from coalfired power generation. Using the Clean Air Alliance method for computing deaths, particulates from country-road usage kills 40,739 people per year, quite the massacre considering there are only about 90,000 deaths from all causes in Ontario each year. Who knew? That quiet drive up back country roads to the cottage for a weekend of barbecues, cozy fires and marshmallow roasts is a form of genocide.

It is astonishing that the mire of twisted and factually incorrect arguments has so long been accepted.

THE JOB CREATION MYTH

The LEEDCo project may produce a *minuscule* amount of electricity, which net amount will be debateable (although world wide there is net zero produced, point two of one percent), at a massive cost, which will also be ultimately borne by the consumers, industry, which will again impact job creation, negatively. Spain has lost 2.2 jobs per so called "green job," the UK has lost 3.8, and Italy 5.4. In an article analysing net job losses from green subsidy push out in Spain and its relevance to President Obama's idolatry of the Spanish model, now seen as disastrous, the <u>author Kenneth Green (Green</u> Job Destruction) suggests "that the U.S. should expect a loss of at least 2.2 jobs on average, or about 9 jobs lost for every 4 created, to which we have to add those jobs that non-subsidized investments with the same resources would have created."

BLOCK ISLAND, and others

The US's first offshore factory, Block Island, already shows evidence of exorbitant cost, job losses for fishing endeavors, and cable problems. Sections of the transmission cable require to be reburied. In some areas, concrete pads have been placed on the cable sections, but other areas do not appear to be suitable for this remediation. <u>Cabling reburying, and grout fatigue and shifting, are recurring problems with offshore</u>, causing up to 70% of the insurance claims. It is confirmed that world wide, "'It was subsequently established that the grouted connection problems were being encountered across the industry and had arisen - to no small degree - due to a fundamental failure in the industry standard design code (J101)..."

The cost to build the Block Island five turbine facility, three miles off the coast of Block Island, R.I., turns out to be about \$150,000 per household. \$300

million, five turbines. *That is just to build*. We can expect similar costs and paucity of results with LEEDCo. Watts Bar, Unit 2, the US's newest nuclear reactor, <u>costs about \$1,044 per household</u>, according to one news outlet. "This means powering a home with the Block Island wind "farm" *(our quotation marks)* is almost 144 times more expensive than powering a home with the newest U.S. nuclear reactor." Forbes magazine asks, "Is America's First Offshore Wind Farm A Real Revolution Or Just Another Green Boondoggle?" It's a sweet deal for Developer Deepwater, but not so wonderful for taxpayers. Deepwater Wind gets 24.4 cents per kwh for the power, more than twice the wholesale price the National Grid pays; the average citizen pays about 10 cents per kwh. And the icing? The developer gets a yearly lift of 3.5%. One wonders how these deals are crafted, to load in favor of developers, with apparent abandonment of common sense.

In Germany, where lessons in green fiascos abound, energy poverty is the new reality. "Germany <u>paid wind farms \$548 million</u> last year to switch off in order to prevent damage to the country's electric grid." Offshore is proving disastrously expensive, and that also is being halted.

CONCLUSION

Please accept our comments and critique of the Draft EA. Please base your careful deliberations on this extremely important matter, whether or not to "eco junk" Lake Erie, on facts, not conjecture, not industry fabrications. The wind industry has been for decades marching to its own tune, with zero transparency, zero accountability, co-opting governments and rent seekers, and unsuspecting landowners, cash-strapped councils, communities, everywhere, creating in a manner, torture, deception, and trespass. Why would we deem it necessary to "count dead birds and bats" even those whose species are deemed abundant, for a completely non-performing destructive product? It is moot to even consider further, really.

Please revisit the fourteen errors and omissions in the application placed in front of the LEEDCo project, by then Chair Todd Snitchler. The obvious now from those important points in relation to the current DRAFT EA, is that the project's promoters have simply papered over the former Chairman's authoritative observations/advice. Please re-administer those requirements, immediately. The project may have a new number, a new consulting or ownership arrangement, a new proposed mono bucket design, but it is indeed the same proposed project, with the same vehement objectionable cause. We request that all the comments under the former FILE number, 13-2033-EL-BGN, for the LEEDCo six turbine project, also be reinstated and placed in the comments file for 16-1871 EL BGN.

Ultimately, this project is cruel, unthinking, and immoral. If we examine the incredible harm to wildlife, birds and bats, degradation of water quality, consumption of materials to construct and maintain, many or most of which are inherently toxic, blades non-recyclable, the disruption of communities everywhere, the use of false premises and fear to dogmatize energy policy in woefully misguided ways, and the ensuing degradation of life for all, one might consider this industry as a kind of virus, or even a kind of terrorism. We are calling on legislators everywhere to enact moratoria votes. We are beginning with a demand for a Great Lakes moratorium, both sides of the border.

"No Action," rejecting the LEEDCo proposal, in this instance will protect the Lakes, the water, the 11 million consumers of water around Lake Erie, fishing, boating and bird watching communities, and all the natural abundance that the area offers. It will contribute to the public good, of conservation, preservation, and economic fairness in energy. "No Action," will be ultimately the largest "Doing Something Magnificent," a gift to the Lakes, wildlife and people of Ohio, and beyond.

Thank you.

Sincerely,

Sherri Lange CEO NAPAW (North American Platform Against Wind Power Executive Director, Canada, Great Lakes Wind Truth Founding Director Toronto Wind Action VP Canada, Save the Eagles International <u>www.na-paw.org</u> <u>www.greatlakeswindtruth.org</u> <u>www.ontariowindaction.org</u> <u>kodaisl@rogers.com</u>

LINKS and RESOURCES

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