Brief for meeting with Ontario's Environmental Commissioner, Dr. Dianne Saxe and MPP Lisa Thompson, April 4, 2016

Prepared by North American Platform against Wind Power: on behalf of Ontario Wind Action, Ontario Wind Resistance, Toronto Wind Action, Great Lakes Wind Truth, Save the Eagles International

na pa w North American Platform Against Windpower

WISE WORDS FROM OUR COMMISSIONER

Q. What advice would you give business leaders trying to reduce the environmental footprint of their company or corporation?

A. You cannot manage what you do not measure. Also, take your impact as seriously *as if a person you love were the one most affected. (Our itals)*

Dr. Dianne Saxe, Environmental Commissioner, in an interview

http://eco.on.ca/about-the-commissioner/

TABLE OF CONTENTS

1. INTRODUCTION

2. SEV *(Statement of Environmental Values, Ministry of the Environment and Climate Change, and Ministry of Natural Resources and Forestry)*

3. Catastrophic Green, Corcoran

4. Ontario: Snapshot of environmental chaos

5. Contaminated water

6. Health Hazard, Brown County, NAPAW, EPAW AND WAUBRA OPEN LETTER

7. NAPAW MEDIA RELEASE BROWN COUNTY

8. WILDIFE BIRDS BATS

9. CONCLUSION

Statements of Environmental Values: HOW ARE THESE BEING CURRENTLY APPLIED? Is intervention required? Yes.

"Each of the ministries subject to the *EBR* is required to develop a Statement of Environmental Values (SEV). A ministry's SEV guides the minister and ministry staff when they make decisions about policies, acts, regulations or instruments that might affect the environment. Each SEV should explain:

- how the ministry will consider the environment when it makes environmentally significant decisions;
- how the ministry will apply the purposes of the *EBR* when it makes environmentally significant decisions; and
- how the ministry will integrate its environmental values with social, economic and scientific considerations when it makes environmentally significant decisions.

Each minister also makes commitments in his or her ministry's SEV that are specific to the work of that particular ministry.

The ECO monitors and reports on ministry compliance with the obligation to consider their SEVs when making decisions that may have a significant effect on the environment."

http://eco.on.ca/2013-the-ebr-and-you-guidebook/statements-of-environmental-values-2/

Review and Report on Government Compliance with the EBR

"In the ECO's annual report to the Legislature, the Commissioner reviews and reports on the government's compliance with the EBR. The ECO carefully reviews how ministers exercised their discretion and carried out their responsibilities in relation to the EBR.

To make sure the EBR is upheld, the Commissioner and ECO staff review how ministries use public input when making decisions about environmentally significant policies, acts, regulations and instruments, and how ministries handle Applications for Review and Investigation.

In particular, the ECO considers whether ministries have complied with the procedural and technical requirements of the law, and whether the actions and decisions of ministers were consistent with the ministry's Statement of Environmental Values and with the purposes of the EBR.

Each year the ECO also reviews the use of the Environmental Registry, monitors appeals of EBR-prescribed instruments, and monitors any

court actions and/or whistleblower claims under the EBR that are brought to the ECO's attention."

IT IS OUR RESPECTFUL SUBMISSION THAT THE MINISTRY OF THE ENVIRONMENT AND CLIMATE CHANGE AND THE MINISTRY OF NATURAL RESOURCES AND FORESTRY HAVE NOT ADEQUATELY PERFORMED BENEFITS AND COSTS ASSESSMENTS, SOCIAL, ECONOMIC AND ENVIRONMENTAL, AS WELL AS HEALTH AND SCIENTIFIC, WITH RESPECT TO A DANGEROUS AND MINDLESSLY VAGRANT WIND TURBINE PROLIFERATION IN THE PROVINCE.

IT IS OUR FURTHER SUBMISSION THAT THE LACK OF PLANNING AND OVERLAY OF AVAILABLE SCIENTIFIC EVIDENCE, SUBSTANTIVE EVIDENCE, FACT, AND APPARENT DERELICTION OF DUTY SHOWN BY THE TWO MINISTRIES AS WELL AS OTHERS, NOW REQUIRES THE IMMEDIATE REMEDIAL AND RESTORATIVE INTERVENTION OF THE ECO (ENVIRONMENTAL COMMISSIONER OF ONTARIO).

MINISTRY OF NATURAL RESOURCES AND FORESTRY SEV

https://www.ebr.gov.on.ca/ERS-WEB-External/content/sev.jsp?pageName=sevList&subPageName=10002

"3. APPLICATION OF THE SEV

The Ministry of Natural Resources and Forestry is committed to applying the purposes of the EBR when decisions that might significantly affect the environment need to be made in the ministry as it develops Act, regulations, and policies, by the application of the following principles:

A sound understanding of natural and ecological systems and how our actions affect them is key to achieving sustainability

As our understanding of the way the natural world works and how our actions affect it is often incomplete, **MNRF staff should exercise caution and special concern for natural values in the face of such uncertainty.**

The finite capacity of our natural systems should be recognized in planning and allocation decisions.

Natural resources should be properly valued to provide a fair return to Ontarians and to reflect their ecological, social and economic contributions.

Participation in resource management by all those who share an interest is a necessary ingredient, particularly in support of communities who must balance economic diversity with other needs. **Those affected by proposed changes must have access to information and opportunities to provide input to decisions that affect their lives.**

Applied research and sharing of scientific and technological knowledge and innovative technologies must be fostered to support the sustainable development of natural resources.

An ecosystem approach to managing our natural resources enables **a holistic perspective of social, economic and ecological aspects and provides the context for integrated resource management.**

The planning for and management of natural resources should strive for continuous improvement and effectiveness through adaptive management of natural resources.

In order to achieve sustainable development, environmental protection must be an integral part of the development process and cannot be considered in isolation.

From both a sound business and environmental perspective, it is less costly and more effective to anticipate and prevent negative environmental impacts before undertaking new activities than it is to correct environmental problems after the fact.

Rehabilitating degraded environments is an important aspect of resource stewardship.

4. INTEGRATION WITH OTHER CONSIDERATIONS

The Ministry of Natural Resources and Forestry will take into account social, economic and other considerations; these will be integrated with the purposes of the EBR when decisions that might significantly affect the environment need to be made.

Strategic planning provides the context for the definition and description of corporate direction. It provides MNRF with the opportunity to:

Identify and analyze ecological, social, cultural, and economic trends at the global to local scales and to gauge change.

Conduct analyses to measure program strengths, weaknesses, opportunities, costs, and threats.

Provide direction to guide the establishment of program priorities, policy, and legislation.

Strategic directions are periodically established by the Ministry to determine its priorities for legislative, regulatory, policy and program initiatives. These strategic directions are applied in Ministry land use and resource management planning, and in the conduct of operations and activities on the ground, often through the provisions of Class

Environmental Assessments in accordance with the Environmental Assessment Act. Specific strategies and actions to help MNRF plan activities are included in MNRF's strategic directions document. MNRF strategic directions are updated when necessary to ensure that it reflects government priorities, the evolving needs of Ontario's citizens, and directions that promote the sustainable use of our natural resources.

http://www.mnr.gov.on.ca/en/About/2ColumnSubPage/200238.html

The Ministry also recognizes the need for openness and consultation in decision-making which may significantly affect the environment. The Ministry is committed to partnership arrangements in natural resources decision-making and management so that the public shares more fully and directly in the benefits and responsibilities of resource stewardship.
The Ministry will encourage energy conservation in those sectors where it provides policy direction or programs." (Bold sections refer to our emphasis)

MINISTRY OF THE ENVIRONMENT AND CLIMATE CHANGE SEV

https://www.ebr.gov.on.ca/ERS-WEB-External/content/sev.jsp?pageName=sevList&subPageName=10001

"1. INTRODUCTION

The Ontario Environmental Bill of Rights (EBR) was proclaimed in February 1994. The founding principles of the EBR are stated in its Preamble:

> **The people of Ontario recognize the inherent value of the natural environment.**
>
> **The people of Ontario have a right to a healthful environment.**
>
> The people of Ontario have as a common goal the protection, conservation and restoration of the natural environment for the benefit of present and future generations.

While the government has the primary responsibility for achieving this goal, Ontarians should have the means to ensure that it is achieved in an effective, timely, open and fair manner.
The purposes of the Act are:

> To protect, conserve and where reasonable, restore the integrity of the environment;
>
> To provide sustainability of the environment by the means provided in the Act; and
>
> To protect the right to a healthful environment by the means provided in the Act.

These purposes include the following:

The prevention, reduction and elimination of the use, generation and release of pollutants that are an unreasonable threat to the integrity of the environment.

The protection and conservation of biological, ecological and genetic diversity.

The protection and conservation of natural resources, including plant life, animal life and ecological systems.

The encouragement of the wise management of our natural resources, including plant life, animal life and ecological systems.

The identification, protection and conservation of ecologically sensitive areas or processes.

To assist in fulfilling these purposes, the Act provides:

The means by which Ontarians may participate in the making of environmentally significant decisions by the Government of Ontario;

Increased accountability of the Government of Ontario for its environmental decision-making;

Increased access to the courts by residents of Ontario for the protection of the environment; and

Enhanced protection for employees who take action in respect of environmental harm."

3. APPLICATION OF THE SEV

The Ministry of the Environment and Climate Change is committed to applying the purposes of the EBR when decisions that might significantly affect the environment are made in the Ministry. As it develops Acts, regulations and policies, **the Ministry will apply the following principles:**

The Ministry adopts an ecosystem approach to environmental protection and resource management. This approach views the ecosystem as composed of air, land, water and living organisms, including humans, and the interactions among them.

The Ministry considers the cumulative effects on the environment; the interdependence of air, land, water and living organisms; and the relationships among the environment, the economy and society.

The Ministry considers the effects of its decisions on current and future generations, consistent with sustainable development principles.

The Ministry uses a precautionary, science-based approach in its decision-making to protect human health and the environment.

The Ministry's environmental protection strategy will place priority on preventing pollution and minimizing the creation of pollutants that can adversely affect the environment.

The Ministry endeavours to have the perpetrator of pollution pay for the cost of cleanup and rehabilitation consistent with the polluter pays principle.

In the event that significant environmental harm is caused, the Ministry will work to ensure that the environment is rehabilitated to the extent feasible.

Planning and management for environmental protection should strive for continuous improvement and effectiveness through adaptive management.

The Ministry supports and promotes a range of tools that encourage environmental protection and sustainability (e.g. stewardship, outreach, education).

The Ministry will encourage increased transparency, timely reporting and enhanced ongoing engagement with the public as part of environmental decision making.

Decisions on proposed Acts, regulations and policies reflect the above principles. The ministry works to protect, restore and enhance the natural environment by:

Developing policies, legislation, regulations and standards to protect the environment and human health,

Using science and research to support policy development, environmental solutions and reporting,

Ensuring that planning, which aims to identify and evaluate environmental benefits and risks, takes place at the earliest stages in the decision- making process;

Undertaking compliance and enforcement actions to ensure consistency with environmental laws, and

Environmental monitoring and reporting to track progress over time and inform the public on environmental quality.

In addition, the Ministry of the Environment and Climate Change uses a range of innovative programs and initiatives, including strong partnerships, public engagement, strategic knowledge management, and economic incentives and disincentives to carry out its responsibilities.

4. INTEGRATION WITH OTHER CONSIDERATIONS

The Ministry of the Environment and Climate Change will take into account social, economic and other considerations; these will be integrated with the purposes of the EBR when decisions that might significantly affect the environment need to be made**. In making decisions, the Ministry will use the best science available.** It will support scientific research, the development and application of technologies, processes and services." (Bold our emphasis)

Kafkaesque: Opposing an industrial wind turbine project in Ontario

Take a look at what happens **when Ontarians try to oppose an industrial wind turbine project**.

Laws, regulations, and processes seem to have eliminated every conceivable obstacle for the mad rush of the (economically useless, environmentally destructive) wind industrialization of rural Ontario. At the same time **they effectively, undemocratically block wind project opponents at every turn**. The Ontario Green Energy Act (GEA) and its quasi-judicial complaints department, the Environmental Review Tribunal (ERT) pitch opponents headlong into **a Kafkaesque nightmare**.

An example:

1. The government gives the Proponent permission to undertake an industrial wind turbine construction project, which includes granting **a special environmental permit** that **allows the Proponent to *kill, harm, and harass*** a Victim or two.
2. Locals launch an appeal on the grounds that the project would, amongst other troublesome consequences, cause serious and irreversible harm to the Victims.

3. The appeal is heard by a **Tribunal**, which issues a very rare decision *favouring* the Victims, finding that the Proponent's project will indeed cause serious and irreversible harm to two classes of Victims.
4. The Tribunal orders a further hearing to consider the Proponent's proposed mitigations of this serious and irreversible harm.
5. In the meantime, however, the Proponent *is legally entitled* (and signals the intention) to go ahead and begin the project site pre-construction work, and in the process kill, harm, and harass Victims, without having to first table mitigation plans at the next Tribunal hearing (see 4 above).
6. Lawyers for the Victims file a motion to have the Tribunal issue a stay of the Proponent's pre-construction on-site activity associated with the special permit to kill, harm, and harass.
7. The Tribunal dismisses the Victims' motion, with reasons for its decision to be given at a later time.
8. Lawyers for the Victims then appeal to a Divisional Court with a motion for a stay.
9. The Divisional Court also **dismisses** the appeal because the Victims' lawyers, through no fault of their own, are unable to establish specific grounds for said appeal, given that they are in the dark about the reasons for the Tribunal's dismissal of the motion (see 7 above).
10. The Victims' lawyers are entitled to renew their Divisional Court motion (see 8 above), if and when they ever receive the reasons for the Tribunal's dismissal decision (see 7 above).
11. Meanwhile, the circle is complete, with **the Proponent apparently free to go ahead and kill, harm, and harass** the Victims, even though there is to be a future Tribunal hearing (see 4 above) at which the Proponent is supposed to make proposals for mitigating the killing, harming, and harassing that probably will already have taken place by then.

That is the saga thus far with respect to the battle between the **Alliance to Protect Prince Edward County** and the wind energy company wpd Canada Corporation.

The GEA and its companion, the ERT have allowed wind energy companies, eager to cash in on the Ontario Liberal government's 20-year-guaranteed, above-market returns, to ride roughshod over democratic rights of people and municipalities. The

kleptocratic subsidy scheme is footed by the taxpayers, and consumers' electricity charges triple as a result.

Wind project opponents are spending inordinate amounts of time and money to fight a losing battle, the contest rigged from the start. For wind project opponents, the ERT appears to be nothing more than a Kafkaesque-Potemkin-kangaroo-emperor-with-no-clothes court.

It gives people the illusion of offering democratic equality and justice before the law. In reality, it forces them to accept the industrialization of rural Ontario against their will, while depleting their wallets and spirit.

What's at play here is just one aspect of the insidious implementation of the UN's one-world-government **Agenda 21**, a blueprint for an anti-prosperity, anti-democratic sustainable development and wealth transfer movement. It uses the cudgel of **the massive scientific deception of manmade climate change** to clobber and guilt people into phony-green-energy submission. It has them running in circles, looking in vain for democracy and laws to protect their rights.

http://business.financialpost.com/fp-comment/terence-corcoran-clean-green-and-catastrophic

FP Comment

Terence Corcoran: Clean, green and catastrophic

Terence Corcoran | April 1, 2016 10:30 AM ET
More from Terence Corcoran | @terencecorcoran

Jeff McIntosh/The Canadian PressIn China, the National Energy Administrator has stopped approving wind turbines because energy is being wasted and parts of the national grid are being disrupted.

There are signs of green economic turmoil everywhere

Green and clean, that's how politicians all over the world like to describe their national energy profiles. From Europe to North America to China, action plans and policies are in place, subsidies have been dispersed and new ideas are in constant production. In Washington Thursday, Prime Minister Trudeau brought his Liberal green message to Washington, telling the U.S. Chamber of Commerce that green industries are the backbone of a strong economy.

Maybe it depends on what "backbone" means and on one's definition of a "strong economy." The latest news on green and clean energy fails to support the standard definitions of either concept. In the wake of government action around the world, industrial plants are closing, so-called green operations are failing, prices are soaring, subsidies are rampant, jobs are being lost, competitiveness eroded and energy consumers, especially the poor, are threatened by regressive carbon taxes.

What's green and clean is turning catastrophic.

Related

- Ross McKitrick: How politicians wrecked the case for carbon taxes

Scanning news stories and the work of the Global Warming Policy Foundation in London, there are signs of green economic turmoil everywhere. Here's a sampling, in no particular order.

Albengoa, the Spanish green-energy giant, filed for bankruptcy protection in the U.S. this week. With help from subsidies, the company built giant wind and solar farms all over the world, from Arizona to Uruguay. Shares once worth $25 are now all but worthless.

In a posting this week, Benny Peiser, head of the Global Warming Policy Foundation, urged the British government to delay carbon-control plans and scrap the country's unilateral Carbon Floor Price, which is contributing to a crisis in the U.K. steel sector and other energy-intensive industries.

One of those U.K. steel companies, owned by Tata of India, is up for sale with no buyer in sight, threatening thousands of jobs and generating a national economic crisis that forced Prime Minister David Cameron to end a personal vacation and fly home. Among the causes of the steel crisis: green energy and carbon taxes.

In China, the National Energy Administrator has stopped approving wind turbines because energy is being wasted and parts of the national grid are being disrupted.

China has claimed to be on a big green streak. It may be closing old coal plants and steel mills that produce smog, but it is not doing all that much on the carbon front. If dirty coal plants are closed, they are replaced by cleaner coal and gas — that is, fossil fuels.

The Wall Street Journal reports that many U.S. states — Arizona, Colorado, Louisiana, Utah and others — are thinking of cutting back on subsidies to homes with solar panels. "What is in danger of being overlooked is the harm inflicted on the 96 per cent of our customers

who do not have solar." Those non-solar customers pick up the subsidy.

Sunedison, the U.S. clean-energy giant and a Wall Street darling, appears to be heading for bankruptcy.

Subsidies to wind appear to be soaring in Ontario. The website Wind Concerns reports that for the first two months of this year, 425,000 megawatt hours (MWh) of wind power were spilled — which means power consumers will have to pay $120 per MWh for wind power that never reached consumers or was not produced. On an annualized basis, that would add $300 million to electricity costs with no electricity to show for it.

Speaking of Ontario, a Forbes article on Wednesday details job losses and lost investment brought on by the province's green-energy policies. "Ontario is probably the worst electricity market in the world, " says Pierre-Olivier Pineau of the University of Montreal.

Pineau's view of Ontario might be debated by Europeans, where green-energy policies — regulations, US$100 billion in subsidies, fracking bans and assorted carbon prices and trading — have sent European electricity prices through the roof. Robert Bryce, in a review for the Manhattan Institute, reports that, since 2005, industrial electricity prices rose 133 per cent in the U.K., 64 per cent in Spain, 49 per cent in France and an average 46 per cent across the EU. Is this a model for North America?

In Germany, the business paper Handelsblatt last week ran a feature. "How to Kill an Industry: Germany's massive push into renewable

energy has a dark side. As green policies drive up the cost of power, entire industries are shrinking." Utilities are losing billions, surplus energy is being dumped on neighbouring countries and industries are moving to Asia.

Another green-energy fantasy, the Powerwall, just bit the dust. Touted not too long ago by Elon Musk, the US$5 billion e-car subsidy grabber, the Powerwall was seen as a potential miracle electricity-storage system for homeowners. It was scrapped this week. Never mind the economics, the chemistry didn't work.

Speaking of Telsa, the multi-billion-dollar electric-car subsidy seeker on Thursday announced its new Model 3, a $35,000, smaller e-car that still qualifies for $8,000 in subsidies at the retail level for buyers.

Carbon taxes, promoted by Trudeau and President Obama, come with big social costs that few want to talk about. A 2009 U.S. study estimates that the carbon-tax burden is a giant regressive tax that is likely to fall disproportionately on people with lower income. There may be fixes to the punishing impact, but none appear to be all that easy to implement.

Finally, a survey of top executives conducted for KPMG and The Globe and Mail shows that more than 50 per cent believe the objective of completely eliminating fossil fuel use by 2050 is "not worthwhile." Nobody said it might lead to another green catastrophe, but that wasn't one of the choices in the survey questions.

China Stops Building Wind Turbines Because Most Of The Energy Is Wasted

Andrew Follett
Energy and Environmental Reporter

The Chinese government isn't building any new wind turbines because most of the new electricity created was wasted, causing serious damage to the country's electrical grid.

The government stopped approving new wind power projects in the country's windiest regions earlier this month, according to a China's National Energy Administration statement. These regions previously installed nearly 71 gigawatts of wind turbines, more than the rest of China combined. A single gigawatt of electricity is enough to power 700,000 homes. Government statistics show that 33.9 billion kilowatt-hours of wind-power, or about 15 percent of all Chinese wind power, was wasted in 2015 alone.

"Even though China will not approve new projects, the scale of existing wind power installations is huge, leaving the grid struggling to cope

with it," Xie Guohui, an analyst at a Chinese think tank, told the environmental blog InsideClimate News Monday. "In the best-case scenario, this policy will help China's wind power curtailment maintain the same level as it was last year."

The amount of electricity generated by a wind turbine is very intermittent and doesn't coincide with the times of day when power is most needed. This poses an enormous safety challenge to grid operators and makes power grids vastly more fragile.

"China is not the only country that has built so much wind capacity that their electric grid can't handle the wild fluctuations in output, and it won't be the last," Myron Ebell, director of the Center for Energy and Environment at the free market Competitive Enterprise Institute, told The Daily Caller News Foundation. "The United States should learn from these incredibly expensive mistakes. Instead, Obama's EPA plows ahead with regulations that will duplicate the worst outcomes-skyrocketing electric prices together with unpredictable interruptions in supply."

In America, merely building a 3,000-mile network of transmission lines capable of moving power from wind-rich West Texas to market in East Texas was a $6.8 billion effort that began in 2008 and still isn't entirely finished. Demand for electricity in China has grown much slower than expected due to the country's general economic slowdown.

Beijing has ordered wind operators to stop expanding four times in the

last five years because unreliable wind power was damaging the country's power grid and costing the government enormous amounts of money. The best areas for wind turbines in China are far away from the coastal provinces where most of its population lives, and building the infrastructure to transmit wind energy over long distances is enormously expensive and could cost many times the price of generating the electricity.

"We've known for a long time that levelized cost comparisons understate the cost of wind and solar because such estimates don't take into account the cost of building new transmission from remote wind-rich generation sites to population centers," Marlo Lewis, an analyst at the Competitive Enterprise Institute, told The Daily Caller News Foundation. "But now we find another cost should be included when new transmission lines aren't built: the wasted power that can't be delivered."

China has spent enormous amounts of money on the country's wind industry. China spent more than $80 billion building new green energy in 2014 alone, while the US spent a "mere" $34 billion. Despite the freeze on new wind-farms, the Chinese government still plans to get 15 percent of the country's electricity from green energy by 2020.

"Gigantic misallocations of capital have been endemic in all aspects of China's economic buildup. Look at the brand new cities that are empty," Ebell continued. "Now that China's boom has cooled down and they don't have as many trillions of dollars of spare cash, they are

not going to be able to invest in everything, but will have to make choices based on profit and loss. Wind and solar power are obviously two of the sectors where investment will be scaled down dramatically."

Global Investment Collapses: Investors Wake Up to the Wind Power Delusion

July 5, 2015 by stopthesethings 9 Comments

Investors face up to the delusion of wind power.

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The wind industry is in meltdown around the globe, simply because investors have woken up to the monumental RISKS.

Risks like: – turbines falling apart in less than 2 years; under pressure from voters, governments pulling the plug on the massive subsidies essential to keep the scam rolling; neighbours suing the operators to obtain compensation and/or to have turbines shut down or removed.

In response to these pretty obvious risks, the amount being stumped up by investors to build more of these things has plummeted.

The scam is little more than the latest Ponzi scheme – with Australia's best and brightest at Union Super Fund backed Pacific Hydro losing $700 million of mum and dad retirement savings; with its parent – IFM

Investors – deciding to ditch Pac Hydro and Pac Hydro deciding to ditch its Cape Bridgewater wind farm disaster.

While the wind industry's parasites and spruikers try hard to pin their woes in Australia on dreaded policy "uncertainty", the situation in Europe – held up by eco-fascists as the wind power Super Model – is just as dire.

The amount being thrown by investors at wind power has dropped off a cliff; in the UK, with David Cameron's election win, subsidies have been pulled to a halt and, as an inevitable result, hundreds of threatened projects have been blown to the four winds.

Behind it all is the simple fact that wind power is not, and will never be, a meaningful power generation source. Here's a solid analysis, that exposes the delusion and details the imminent collapse of the greatest economic and environmental fraud of all time.

The Difficulties Of Powering The Modern World With Renewables
Roger Andrews
10 June 2015
Energy Matters

In the May 12, 2015 "G7 Hamburg Initiative for Sustainable Energy Security", the energy ministers of Canada, France, Germany, Italy, Japan, the United Kingdom and the United States, plus the European Commissioner for Climate Action and Energy, said this:

An increasing number of countries are following the path of a rapid expansion of renewable energy. There (are) a number of challenges as energy systems change and related greenhouse gas emissions are

reduced, one of which is how to integrate growing shares of variable renewable energy into electricity systems.

The G7 energy ministers are correct in their assessment. Integrating growing shares of variable renewable energy into electricity systems is indeed a challenge – and so far one without a good solution.

A few quick facts before proceeding. In 2013 renewables supplied the world with 21.7% of its electricity, according to BP. Take out hydro and they supplied the world with only 5.3% of its electricity. Then take out "other" renewables such as biomass and geothermal and the percentage falls to 3.3%.

Why take out hydro and "others"? Because their growth potential is limited by resource availability – too few good hydro sites, too few high-temperature geothermal fields, not enough wood to make biomass pellets etc. – and for these reasons they may never make a significant contribution to future global energy needs. Their growth performance since 1997, the year the Kyoto Protocol set the renewables bandwagon rolling, has certainly been less than impressive, as illustrated in Figure 1. "Others" have gained market share, but at a painfully slow rate, and hydro has actually lost ground:

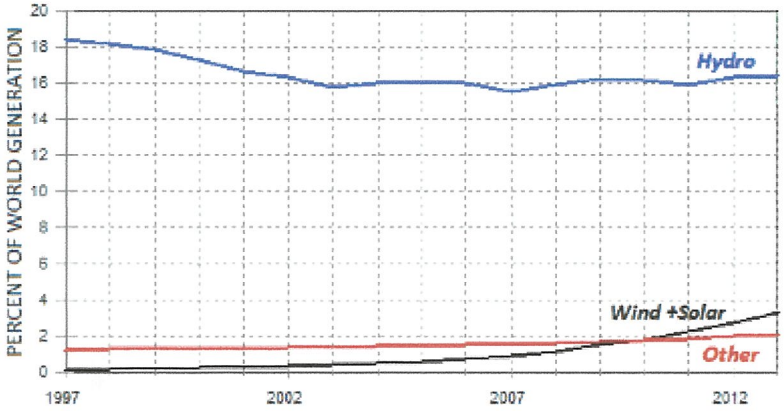

Figure 1: Percentage of world electricity generation contributed by different renewable sources, 1997-2014 (data from BP)

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Not so, however, for wind and solar, which aren't resource-limited (the amount of solar energy hitting the earth in a year, for example, vastly exceeds annual global energy consumption). They show rapid growth since 1997, although from small beginnings. Clearly they are the energy sources the world must concentrate on developing if it is ever to "go green".

And why shouldn't continued rapid growth in wind and solar allow the world to go green? I've discussed the reasons piecemeal before. Here I summarize them all in the same post:

Intermittency

Intermittency, or non-dispatchability, is the Achilles heel of wind and solar. So far it hasn't caused widespread problems because wind and solar still contribute only a small fraction of total power generation in most countries. Integrating wind power into the UK grid in February 2013, for example, was not difficult because wind only supplied 5% of the UK's electricity in that month:

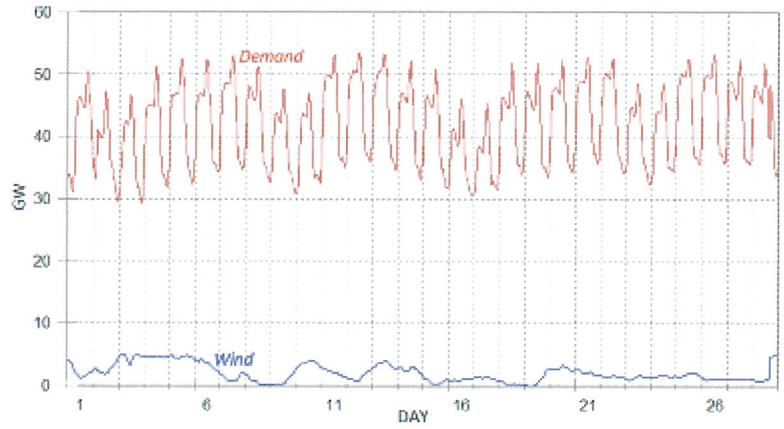

Figure 2: UK electricity demand and wind generation, February 2013 (data from Gridwatch)

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But if in February 2013 the UK had had enough installed wind capacity to generate 50% of its electricity from wind Figure 2 would have looked like this:

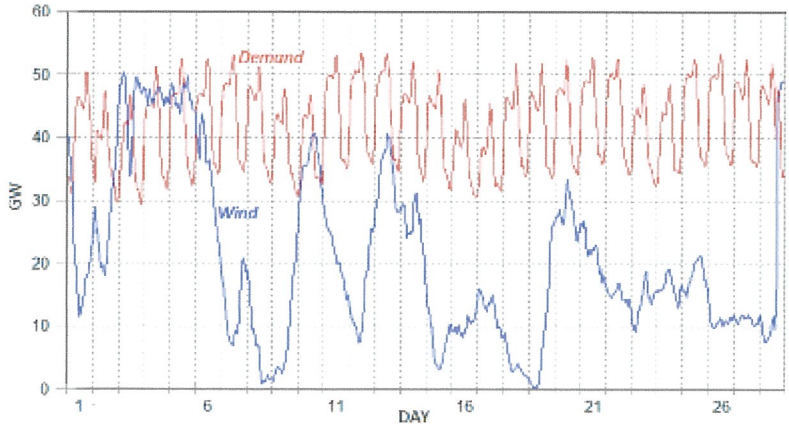

Figure 3: UK electricity demand and wind generation with wind supplying 50% of demand, February 2013

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Now it's a different ball game. How do we match a generation curve like that to demand, or at least smooth it out to the point where it

becomes manageable? There is in fact a way of doing it, but we'll get to it later. First we will discuss the options that won't work.

Energy Storage

This is the obvious solution; store intermittent renewable energy during periods of surplus generation and release it during deficit periods. But the only existing technology that can do this at the scale necessary is pumped hydro, and as discussed at length in previous posts here, here and here the amount of pumped hydro storage needed is enormous. At only moderate levels of solar & wind penetration the UK would need several terawatt-hours of storage, maybe as much as a hundred times the capacity of its existing pumped hydro plants, while Europe and the US would need tens of TWh each and the world proportionately more. There is no realistic prospect of bringing this much new pumped hydro – or even conventional hydro, which can also function in an energy-storage mode – into service in the foreseeable future even if enough suitable hydro sites could be found.

The alternative is battery (or flywheel, or compressed air, or thermal) storage. These technologies are so far from deployment on the multi-terawatt-hour scale that they can be discounted. (According to Wikipedia total world battery + CAES + flywheel + thermal storage capacity still amounts to only about 12GWh, enough to fill global electricity demand for all of fifteen seconds.)

Another option that's been mooted as a potential solution to the storage problem is electric vehicle batteries, which can be charged from the grid during periods of generation surplus and discharged

back into the grid during periods of deficit. But this option also founders on the rock of scale. Assuming a 100% charge/discharge capability and no energy losses during the charge/discharge process we would still need 12 million 85kWh Teslas (or 42 million 24kWh Nissan Leafs) to get a single terawatt-hour of storage.

Grid Interconnections

It's frequently assumed that a smart grid covering a large enough area, like the proposed European supergrid, will be able to smooth out local spikes and troughs in renewables generation and provide "reliable electricity" to all. Unfortunately it won't. Figure 4, reproduced from Wind Blowing Nowhere compares 2013 wind generation in Spain, the largest producer, with combined wind generation in Belgium, the Czech Republic, Denmark, Finland, France, Ireland, Germany, Spain and the UK. Combining wind generation from all nine countries doesn't flatten out the Spanish spikes or fill in the Spanish troughs. It just moves them around:

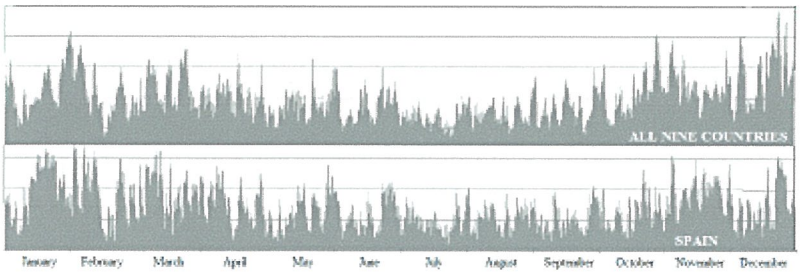

Figure 4 : 2013 wind generation in Spain versus combined wind generation in Spain and eight other countries (data normalized)

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What about solar? Seasonal and diurnal variations in solar generation can be smoothed out by combining output from different areas, but the European supergrid would have to link up with New Zealand to do it.

Combining Generation from Different Renewable Sources

It's also been claimed that because the wind and the sun blow and shine at different times we will get smoother power output when we combine them. That doesn't work either. Figure 5 re-plots the Figure 2 case with the UK getting 40% of its electricity from wind and 10% from solar instead of 50% from wind. Adding the midday solar spikes, which lead evening peak demand by about five hours in the winter, if anything makes things worse:

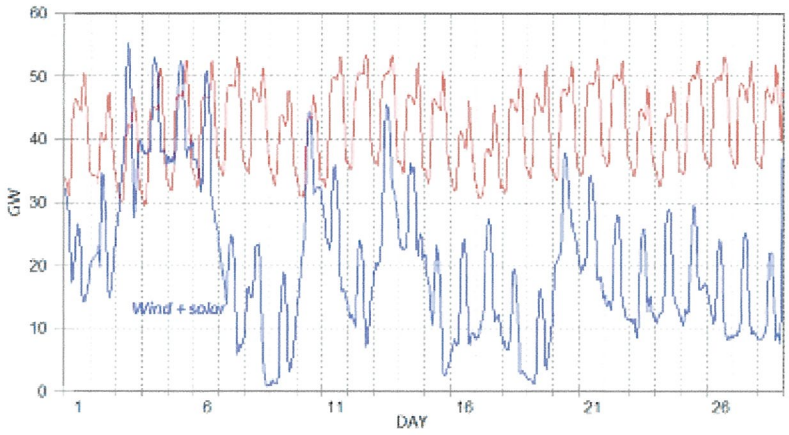

Figure 5: UK electricity demand and wind generation with wind supplying 40% and solar 10% of demand, February 2013

***

Demand-side management

A lot of faith is pinned on the potential of DSM, which instead of matching generation to demand seeks to match demand to generation, or at least to match it as closely as possible. But there's no way demand could be matched to the generation curves shown in Figures 3 or 5. The best that could be hoped for is an incremental improvement, maybe a flattening of the daily demand curve and/or a reduction in total demand, but the larger problem of how to smooth out bursts of intermittent power into a manageable form would remain unresolved.

And then there's the great unexploited renewable resource:

Tide Power

It's predictable, infinitely renewable and has near-unlimited potential. What's not to like about it? As discussed in the Swansea Bay post (link above), quite a lot. Arguably the best indicator of tide power's lack of potential, however, is that almost fifty years after the world's first tide power plant went in at La Rance in France it still supplies less than 0.005% of the world's electricity.

So if energy storage, supergrids, combining output from different sources, demand-side management and tide power won't work, what will? Only one thing:

Fossil Fuel Backup

The concept is simple: use load-following fossil fuel capacity – I'm going to assume gas turbines – to generate the electricity needed to meet demand whenever renewable energy can't generate enough. The approach requires no storage and imposes no theoretical limits

on the level of wind & solar penetration, as discussed in How much windpower can the UK grid handle and Wind power and the island of Denmark. Figure 6 illustrates how it would apply to the 50% wind penetration case shown in Figure 2:

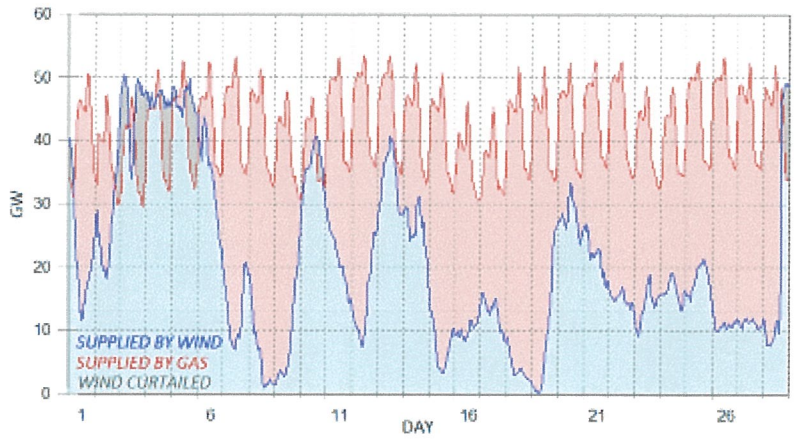

Figure 6: Combined wind and backup gas generation matched to UK demand, February 2013

***

Inevitably, however, there are problems. One is that there are times when wind generation exceeds demand and has to be curtailed, and as a result the UK gets only about 47% of its electricity from wind instead of 50% in the above case. Another is the generation curve the gas turbines would have to follow to fill demand when wind generation can't, which looks like this:

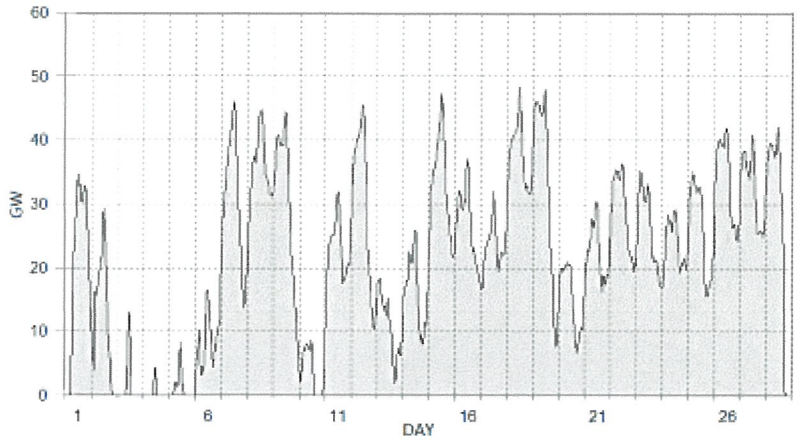

Figure 7: Generation curve gas turbine generation must achieve to balance UK wind generation fluctuations, February 2013

***

Tracking this erratic generation curve would severely stress the gas turbines (and probably the grid operators too). Wear, tear, downtime and generation costs would all increase, as would fuel consumption because of the constant start-up and shutdown, thereby offsetting some of the CO2 emissions reductions generated by the wind energy.

And that's with 47% wind penetration. At higher levels the system becomes progressively more inefficient until at 80-90% penetration it's running at load factors as low as 10% and well over half of the wind generation has to be curtailed (more details in the tables in the How much windpower post linked to above). We can therefore anticipate that this approach will also eventually run up against the hard wall of reality, if only because sooner or later it will occur to someone that it would be a lot easier to keep the dispatchable gas generation and do away with the non-dispatchable wind generation altogether.

But the way things are going there's a good chance that this point will never be reached. Why? Because of a problem that's rarely taken into consideration:

Lack of Investment

Every year UNEP publishes a chart of annual global investment in renewable energy, the lion's share of which (92% in 2014) goes to wind and solar. Here's the latest version:

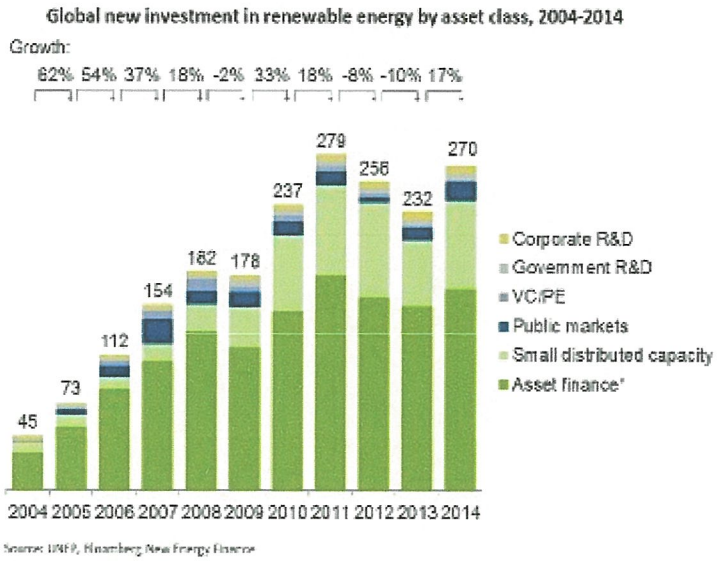

Figure 8: Global investment in renewable energy, $ billion, reproduced from UNEP

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Total investment in renewables since 2004 now exceeds $2 trillion – a lot of money, but it's still far short of what's needed to stimulate growth to the point where renewable energy, assuming it can be made to work, eventually powers the world. The $232 billion invested in renewables in 2013 was dwarfed by the $1.6 trillion total global energy

investment in that year reported by IEA, and of the 235GW of new generation capacity installed globally in 2012 only 76GW was wind or solar, according to EIA and BP. If investments in conventional generation continue to dominate to this extent then wind and solar are doomed to remain also-rans. A very substantial transfer of investment from conventional generation to wind and solar will be needed if they are ever to become the dominant players, but the investment climate needed to achieve this just isn't there.

Another question is whether global renewables investment might not already have peaked (as shown in Figure 8, it's certainly flattened out). Renewables investment is still increasing in the developing countries – notably China – but it's been essentially flat in the US since 2008 and in Europe it's been declining since 2011. Europe in particular bears watching because if the decline continues at the rate shown in the Bloomberg New Energy Finance chart below it won't be long before Europe will have had all the clean energy it's going to get:

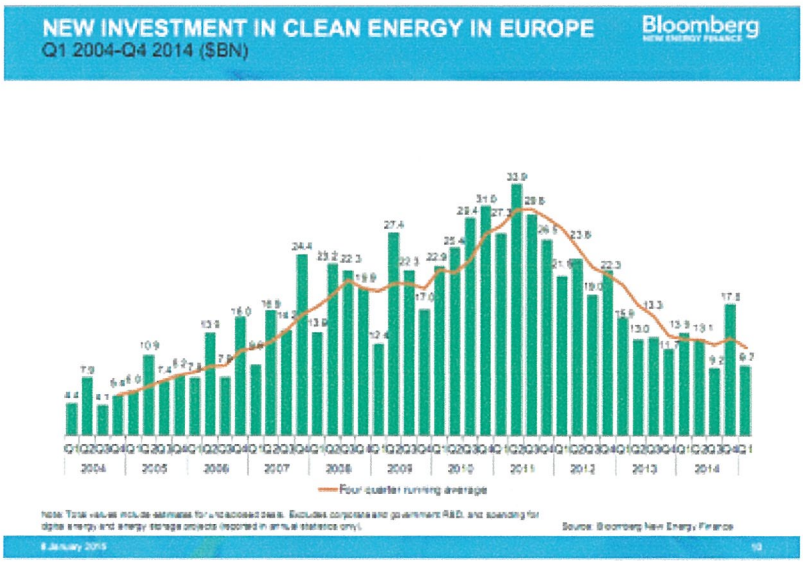


Figure 9: Investment in clean energy in Europe (graphic from Bloomberg, first quarter 2015 data from Reuters added by RA)

***

And finally the big problem. Even if the world succeeds in developing wind and solar to the point where they supply 100% of its electricity the job is still less than half-done because electricity supplies the world with only about 40% of its energy. The remaining ~60% comes from the oil, gas and coal consumed in transportation, heating etc. How to decarbonize that? Again no solution is presently in sight.

Energy Matters

The Wind Industry: from here on, it will only be deluding itself.

Germans Face Wind Powered Economic Nightmare: €Billions Squandered on Subsidies, as CO2 Emissions Rise

March 26, 2016 by stopthesethings 11 Comments

All for nothing ...

****

The Germans went into wind power harder and faster than anyone else – and the cost of doing so is catching up with a vengeance.

The subsidies have been colossal and the impacts on the electricity market chaotic.

Some 800,000 German homes have been disconnected from the grid – victims of what is euphemistically called "fuel poverty". Power starved Germans, instead of freezing, grabbed their axes and tramped into

their forests to improve their sense of energy security – although foresters apparently take the view that this self-help measure is nothing more than blatant timber theft (see our post here).

German manufacturers – and other energy intensive industries – faced with escalating power bills are packing up and heading to the USA – where power prices are 1/3 of Germany's (see our posts here and hereand here). And the "green" dream of creating thousands of jobs in the wind industry has turned out to be just that: a dream (see our post here).

Those in charge of Germany's power grid have stepped up calls for an end to the lunacy of trying to absorb a wholly weather dependent generation source into what was never designed to deal with the chaos presented on a daily basis:

Germany's Wind Power Debacle Escalates: Nation's Grid on the Brink of Collapse

The economics are so bizarre, that you'd think its "Energiewende" policy had been put together by the GDR's 'brains trust', before the Berlin Wall took its tumble in 1989.

In Germany, around €100 billion has already been burnt on renewable subsidies; currently the green energy levy costs €56 million every day. And, the level of subsidy for wind and solar sees Germans paying €20 billion a year for power that gets sold on the power exchange for around €2 billion.

Squandering €18 billion a year on power – which Germans have in abundance from meaningful sources – has them asking the fair and

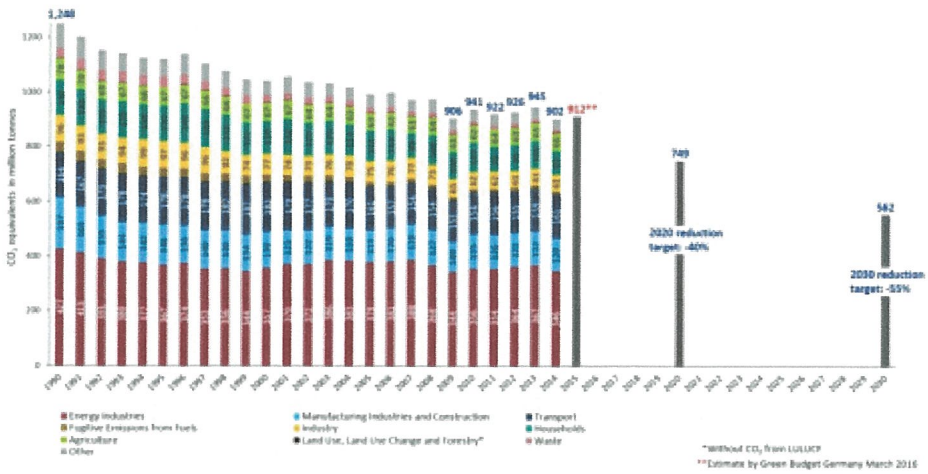
reasonable question: just how much power are they getting for the €billions that they've thrown – and continue to throw at wind and solar? The answer – at a piddling 3.3% – is: NOT MUCH.

For Germans, that would all be miserable enough, except that – contrary to the purported environmental purpose of their Energiewende – CO2 emissions are rising, not falling as promised and predicted.

If "saving" the planet is – as we are repeatedly told – all about reducing man-made emissions of an odourless, colourless, naturally occurring trace gas, essential for all life on earth – then German energy/environmental policy has manifestly failed. And what an expensive failure it is.

Grand Debacle: Germany's Renewable Energy Effort Turning Into A Colossal, Costly And Senseless Failure!
NoTricksZone
Pierre Gosselin
17 March 2016

Mike Shellenberger, President of Environmental Progress and Time Magazine 'Hero of the Environment', appeared dismayed when he tweeted here that Germany CO2 emissions rose over 1% in 2015, as the following chart shows:



Graph by Clean Energy Wire, data from German Environment Agency (UBA) and Green Budget Germany. More here.

In 2015 Germany's CO2 emissions rose to 912 million tonnes, up from 902 million tonnes from a year earlier and from 906 million tonnes way back in 2009. Overall Germany's CO2 emissions savings have trended slightly upwards over the past 7 years.

Megan Darby at Climate Home here calls the development "a blow to the country's claims to climate leadership".

Schellenberger has every reason to be shocked by the 2015 result.

1. 2015 was Germany's second warmest year on record, meaning fuel consumed for heating had to have been low.

2. Germany has invested tens of billions of euros in its bid to switch to CO2-free energy sources. Angela Merkel top aide Peter Altmaier warned that the Energiewende would cost 1 trillion euros.

3. Consumers, who were once into thinking it wasn't going to cost much, are now paying close to the highest electricity prices worldwide. One kilowatt-hour costing close to €30 cents. Hundreds of thousands

of households are having their power cut off because they can no longer afford to pay their power bills.

4. Germany power grid is now more unstable than it has been in decades. That fact in combination with the high electricity prices is driving industry out.

5. Germany's per capita CO2 emissions are among the highest in the world.

6. About half of Germany's CO2 reductions since 1990 resulted from the shut-down of former communist East Germany's inefficient state-run industry.

7. Wind parks have blighted much of the country's idyllic landscape and thousands of people are now suffering from health damage due to infrasound. Planned windparks are facing increasingly ferocious protests from nature protection and citizens groups.

8. 2016 will likely also see no reductions – thanks to the low petroleum prices and colder weather so far.

Socialism and energy!

In summary Germany's Energiewende has been an extremely costly government-intervention debacle of monumental dimensions.

We haven't seen such a large-scale industrial mismanagement since the collapse of the USSR and the German Democratic Republic.

Recall that not only did their industry collapse into a heap of rubble, but they too also left huge environmental damage that we are still cleaning up 25 years later.

And no one in his/her right mind expects Germany to meet its 2020 target, let alone 2030. Other countries have to be insane (or have lots of money to burn) to follow the German example.

NoTricksZone

German wind turbines go 'down', while CO2 emissions go 'up'.

Gone are the days of beautiful Ontario....

http://www.windontario.ca/

"These wind projects will change this place more totally, more rapidly and more permanently than anything in the past 10,000 years."

James Corcoran, South Huron, Ontario 30 years' experience, environmental assessments on behalf of developers.

The Human & Environmental Impact

To appreciate the full impact of turbines on our people, please find the time to read this:

http://www.southwesternontario.ca/news/public-fills-gallery-to-hear-wind-turbine-concerns/

Wind companies:

Pay a lower tax rate than other corporations. Turbines worth an estimated $5 million have been assessed at an estimated $60,000.
Have farmers who sign lease contracts, sign a gag order.
Are exempted from municipal bylaws, building permits, proximity to highways, drainage issues.
Have weight restrictions on roads and bridges lifted during construction of wind projects.
May (do) destroy protected wetlands.
May (do) cause death or harm to endangered species.
Are exempt from the $10,000 fine in the event

of destroying an eagle's nest.
Override the Heritage Act.

Wind companies sue municipalities/persons who get in their way.

The government supplies lawyers to back a wind company; but has never backed a municipality, group or person.

Municipalities have had all rights removed regarding wind projects.
Over 80 municipalities are "unwilling hosts" to turbines, but are not acknowledged.

Every turbine destroys 3 acres of land; roughly 21,000 acres of farmland lost forever.

Ontario turbines are closer to people than any place in the world.

Turbine neighbors suffer from turbine noise and wind turbine syndrome which can be life threatening.

Residents are abandoning their homes at a unprecedented pace.

The fortunate are bought out by the wind companies, but must sign a gag order.

Rural Ontario areas are becoming ghost towns.

The Birds

March 2014 – Lambton Shores – Rest area for Migrating Tundra Swans

March 2015 – Lambton Shores – Rest area for newly built wind turbines.

People call turbines bird blenders because they slice, maim and slaughter birds.

Turbines are built in the precise paths of the millions of birds

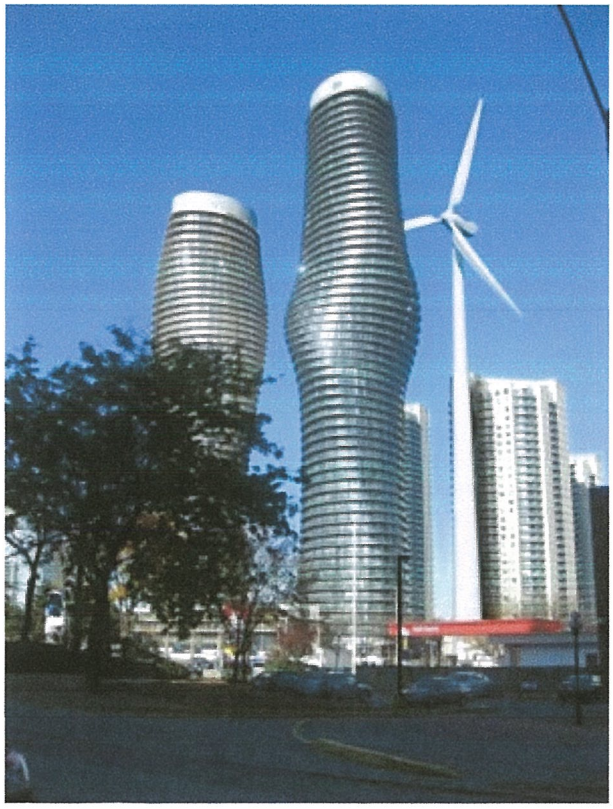
that migrate to or through Ontario.
Turbines kill more bats than birds (their lungs explode from the turbine's drop in air pressure).
Don't neglect the importance of bats to our eco-system.
Earthworms are absent around turbines. (It is thought to be from the vibration in the ground).
Farms need the three types of earthworms to keep the land fertile for crops. No worms, no crops.

A Perspective of Turbine Height

Using the Absolute Towers in Mississauga rendered in as a backdrop:
Absolute Towers is 56 storeys.
The small turbine is the CNE turbine – 299 feet high.
The mid-size is the average Ontario turbine - 380 feet high.
The tall one is the new Ontario turbine - 550 feet and taller.

The rendering below provides a perspective of Ontario's new turbines.

The building behind is 38 storeys.



Ontario's wind energy policy is convoluted and wastes money.

- Nuclear, hydro, & gas is clean, cheap and has a 100% reliability, but wind (with 20-30% reliability) is given priority to our grid.
- For every kwh of wind power, we need one kwh of backup, that could otherwise be used as our sole source.
- **Ontario has too much power and we either, pay the USA & Quebec to get rid of the excess or charge 1-3 cents per kwh.**
  From 2005 to 2012, the loss was $1.8 billion.
  In 2013, the loss was $1 billion.
  In October 2014 alone, Ontario paid $1 billion over market price for energy resulting in an immediate increase in hydro rates,
- Quebec turns around and sells our hydro at 5 cents per kwh to bordering States.
- When there is too much power, Ontario pays $1 million dollars a day to take a nuclear plant off-line

and pays wind companies to shut down their turbines.

- $6 billion was spent to increase the power at Niagara Falls; only to divert the water when there is excess power.
- Ontario pays gas plants to run as backup for wind power.
- September 11, 2013: Ontario agreed to pay Wind Energy companies $200,000 per mw not to supply power,
  The government says it's "cheaper than paying the USA & Quebec to use it".
- The plan to build two new nuclear reactors at Darlington was abruptly cancelled in October 2013 at a cost of $180 million.
- During the 2011 election, the Liberals cancelled the construction of 2 gas plants to win Liberal seats at a cost of $1.1 billion.
- The Lambton coal plant had just been upgraded at a cost of $1 billion to produce clean coal before it was closed in October 2013.
  Ironically, the Lambton coal plant is 1 km from a coal plant in Michigan that is still active.

"This situation is expected to get much worse over the next several years as significant amounts of wind, hydraulic and nuclear generation will be coming into service while expected electrical demand will continue to be stagnant."

Ontario Society of Professional Engineers. Refer to Sources for complete report

Another $221 million loss in June 2015, totaling $1.1 billion for the first 6 months of 2015

In June, Ontario exported 1.9 terawatts (TWh) of electricity to Michigan, New York and Quebec.

Ontario received payment for those exports at the rate of 1.53 cents per kWh totaling of $29.1 million.

The cost to produce and transmit such was 13.14 cents per kWh totaling $249.9 million.

Net Loss to Ontario for one month = $221 million.

For every $billion wasted in electricity, the cost to your household is approximately $250.

Truth is stranger than fiction

Ontario pays 13.4 cents for electricity.
Ontario pays or charges Quebec cheap rates take our excess.
The loss is subsidized by Ontario consumers.
Quebec sells it to border States for 5 cents.
Consequently:
Manufacturers can move to the States and get cheap power; that is subsidized by Ontario consumers.

New York State sees an opportunity.
Promotional information was sent to Ontario's Manufacturing sector citing Ontario's high energy costs as a good reason to relocate to New York State.
http://www.theglobeandmail.com/news/politics/soaring-energy-prices-making-ontario-look-dim-for-manufacturers/article17560172/

Wolfe Island – photo rendering shows pre-turbine days

Wolfe Island – actual photo

The Vulnerability of our Grid

- When produced, power has to be used immediately; there's no technology to store it for a later time.
- There is excess power almost every hour of every day, and Ontario scrambles to find a state/province that will take it.
- Depending on their power needs at the time, we either give it away (spill it), pay to take it (spill it) or charge a very low rate.
- Because wind power is so unpredictable, the IESO staff are continually manipulating the grid; telling the nuclear, gas and hydro suppliers to adjust their output accordingly; and the excess is then sent to Quebec, Manitoba and the States.

According to the Ontario Society of Professional Engineers:

Carbon Dioxide Emissions will increase by 48% in 2030, because gas plants constantly starting up and shutting down expel more emissions than if they ran continually.

Much of our wind power will go to Quebec and the States.
Wind blows mostly at night and in the winter when we need power the least.
There is no wind on a hot summer day, when our air conditioners need it the most.

Constant changes to the grid are prone to error and Ontario's grid wasn't built to handle such.
Be prepared for frequent and long blackouts or worse, as in complete failure of our energy grid.

Rondeau Bay

Ontario has more than enough power with Nuclear, Hydro (water) and Gas.

Ontario's average demand for power is roughly 18,000 mw. In the last 10 years, Ontario's highest demand for power was 27,005 mw on August 1, 2006.

The amount of available reliable power is 30,806 mw which far exceeds the demand.
Nuclear = 12947 mw: Hydro = 7939 mw; Gas = 9920 mw.

The Liberals will have added 3725 mw of installed wind energy by the end of 2014. With intentions of adding more.

"Ontario will phase in wind, solar and bioenergy ....with 10,700 MW online by 2021."
Ministry of Energy

A side note: Ontario is also using Biomass energy

Ontario is offering 44-88 cents per kwh for bioenergy

The role of trees and forests in our ecosystems is absolutely critical.
A single tree can absorb 10 pounds of air pollutants a year, and produce nearly 260 pounds of oxygen; enough to support

two people.

Yet:

Forests and woodlots are being cleared Ontario, where trees are trucked to incinerators (up to 500 km in distance), to be burned for energy fuel.

As an example, Google Atikokan.

Chatham Kent – photo rendering shows pre-turbine days

Chatham Kent – actual photo

The Driving Force

"The province's wind and solar power initiatives were decided and implemented in such haste that "no comprehensive business-case evaluation was done to objectively evaluate the impacts of the billion-dollar commitment."

Auditor General of Ontario

The Liberals introduced and passed the Green Energy Act 2009.
The NDP have supported the Liberals on wind energy since its inception.
The PC's do not support subsidized wind power.

The key person behind Ontario's move to Wind Energy is Gerald Butts who is currently chief advisor to Federal Liberal leader Justin Trudeau.
Butts was Principal Secretary to Premier McGuinty, who states that he was intimately involved in the government's environmental initiatives.

Members of the Liberal party are profiting from Ontario's wind energy.

One example:
In 2004, **Mike Crawley**, the (then) President for the Ontario Liberals,
was awarded a wind power contract that guarantees his company $66,000 a day for a total of $1/2 Billion dollars.

Since then, Crawley has been awarded additional Wind Project contracts.

Crawley is currently President of the Federal Liberal Party. (At the time of this writing. He is now a senior officer for Northland Power, one of the premier Canadian wind developers. How do you spell conflict of interest?)

There are now about 50 resident wind lobbyists in Toronto. The Wind Industry held a fundraising event for Kathleen Wynne in April 2013.

Those who promote Wind power, benefit financially by doing so.
David Suzuki, Pembina Institute, Cleantech,
MaRs, Environmental Defence,
Friends of the Wind, Windfacts and CANWEA.

Lake Ontario – photo rendering shows pre-turbine days

Lake Ontario – actual photo

Every project could be stopped today; if the Liberals want to.

The Ontario Government has the discretionary power to cancel or modify these contracts but it's clear they don't want to.

An Ontario court ruling in the decision of *Trillium vs. Ontario*, 2013, clearly states that:

"Governments are free to alter policies in the public

interest."

"Companies in the renewable power business participate in government subsidy programs 'at their own risk'."

"If you are asking me, will you cancel those [wind project] contracts outright? The answer is no we won't!"

Kathleen Wynne, in Kincardine, April 24, 2014

For ruling, refer to Discussion at the bottom of this page http://www.osler.com/NewsResources/Appeal-Court-Allows-2-Billion-Wind-Farm-Action-to-Proceed-Against-Government-of-Ontario/

Chatham Kent Airport – Location of turbines was denied by

Transport Canada, fought by the municipality, but approved by the Ontario Government. The same is happening in Collingwood, Peterborough, Goderich, Kincardine, Huron Park, Grand Bend and the Niagara Region.

The sky-diving club in Niagara Region will have to shut down.

The Liberal's response is shown in this video:
https://www.youtube.com/watch?feature=player_embedded&v=XWIrAdcscoA

Energy Platform by Party

The PC's introduced Bill 42 in 2012 and Bill 39 in 2013 to eliminate wind subsidies and give control back to municipalities.
The NDP's and Liberals voted against these bills. Refer to Sources.

Liberal

Pursuing additional wind power projects.

NDP

Committed to "aggressively expand renewable energy".

Place a moratorium on all renewable power projects starting in 2018.

Progressive Conservatives

Scrap Ontario's wind energy policy.

Eliminate wind subsidies, which would substantially reduce our hydro bills.

Wolfe Island

Wolfe Island before & after the Liberal's energy policies

Is Nothing Sacred?

Near Peterborough, a $40 million project to build the largest Buddhist complex outside of China is in jeopardy.
The Liberals knowingly approved wind turbines to surround the complex.

The people in charge of the development say these turbines will have a negative impact on the serenity of the complex. This complex would have attracted about 45,000 visitors a year and generated more than $20 million for Ontario.

Wind Farms slated for Ontario

Click here to see maps of these projects

Rondeau Bay – photo rendering showing pre-turbine days

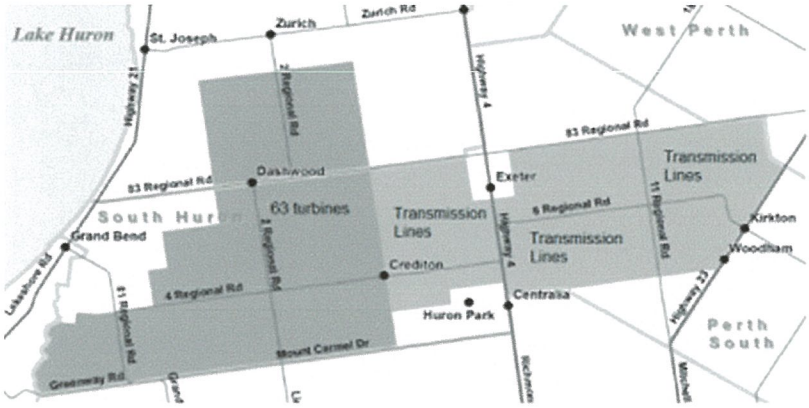
Rondeau Bay – Actual photo

Wind verses Nuclear

- Nuclear power costs 6.8 cents per kwh, period.
  Wind power costs 11-13.5 cents per kwh, plus all other costs mentioned above.
- One wind project approved for the area east of Grand Bend is approximately 34 km long and 16 km wide.
  The nuclear footprint is 9 sq. kilometers.
- It will have 63 wind turbines with a maximum output of 102 mwh.

- Applying efficiency factor of 30%, actual output will be 30 mwh.
- Ontario average usage is 18,000 mwh.
- Nuclear can provide approximately 12,947 mwh 24/7.
- This wind project has the potential of providing .16% (**1/6th of one percent**) our energy needs.
- When there is no wind, it will provide 0% of our energy needs.

Map



In 10-20 years

- The Niagara Falls hydro generating stations are 100 years old, but wind turbines are good for only 10-20 years.
- Each turbine construction consists of 800 tonnes of cement for support, approximately 250 tonnes of unrecyclable materials, 700 litres of hydraulic fuel and, 600 kilograms of rare earth metals. Multiply these numbers by 7700 and Ontario is facing a potential ecological conundrum.
- The are no bonds posted to ensure these turbines will be dismantled at the end of their life cycle. It is estimated that a turbine, depending on size, will cost $400,000 to $1,000,000 to dismantle.
- Given that wind companies are predominantly foreign, change ownership or, go bankrupt, it is quite realistic to expect 100's or 1,000's of dead turbines in 20 years and left standing.
- This is happening already. Wind Companies usually don't fix or dismantle broken turbines and, Ontario already has many non-functioning turbines.
  If companies won't dismantle a couple of turbines now; what about the future ones?

- The Liberals have no plans as to where to dispose these materials, nor have indicated that wind companies will be responsible for the costs of building the landfill sites or depots.
- One can only assume, that the cost to dispose 7700 turbines will be covered by the people of Ontario.

In 10-20 years, we could be faced with a landscape of old, rusted out, broken down turbines.

"When I was young, I was scared of the dark.
Now when I see my electricity bill I am scared of the lights."

THE MAGNITUDE OF SITING, INSTALLED AND PROPOSED

https://windpowergrab.wordpress.com/2011/03/31/industrial-wind-turbines-in-ontario/#more-53

7,700 Large Onshore Wind Turbines in Ontario

To see the most recent list of turbines installed in or proposed for Ontario (Canada), click this link:

- ***Ontario turbines installed or proposed by Mar 10***

WIND TURBINES For Ontario by County

INSTALLED – APPROVED – PROPOSED IN ONTARIO ---- AS OF OCTOBER 2013

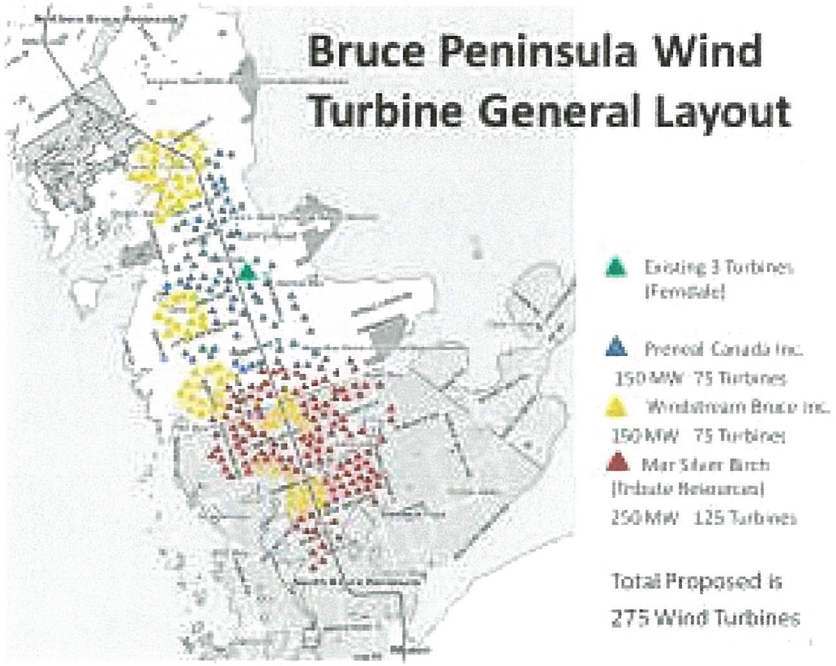
ALGOMA	609	NORFOLK	41
BRUCE	827	NORTHUMBERLAND	30
CHATHAM-KENT	629	OTTAWA	8
COCHRANE	15	OXFORD	28
DUFFERIN	246	PARRY SOUND	299
DURHAM	16	PEEL	5
ELGIN	97	PERTH	31
ESSEX	312	PETERBOROUGH	3
FRONTENAC	86	PRESCOTT	15
GREY	156	PRINCE EDWARD	195
HALDIMAND	216	RAINY RIVER	10
HURON	521	RENFREW	1 00
KAWARTHA LAKE	18	SIMCOE	17
LAMBTON	363	STORMONT	24
LANARK	6	SUDBURY	1
LEEDS	6	THUNDER BAY	537
LENNOX	78	TIMISKAMING	200
MANITOULIN	204	TORONTO	10
MIDDLESEX	228	WATERLOO	10
NIAGARA	64	WELLINGTON	73
NIPPISING	48	YORK	151

PROVINCE OF ONTARIO – CROWN LANDS 203

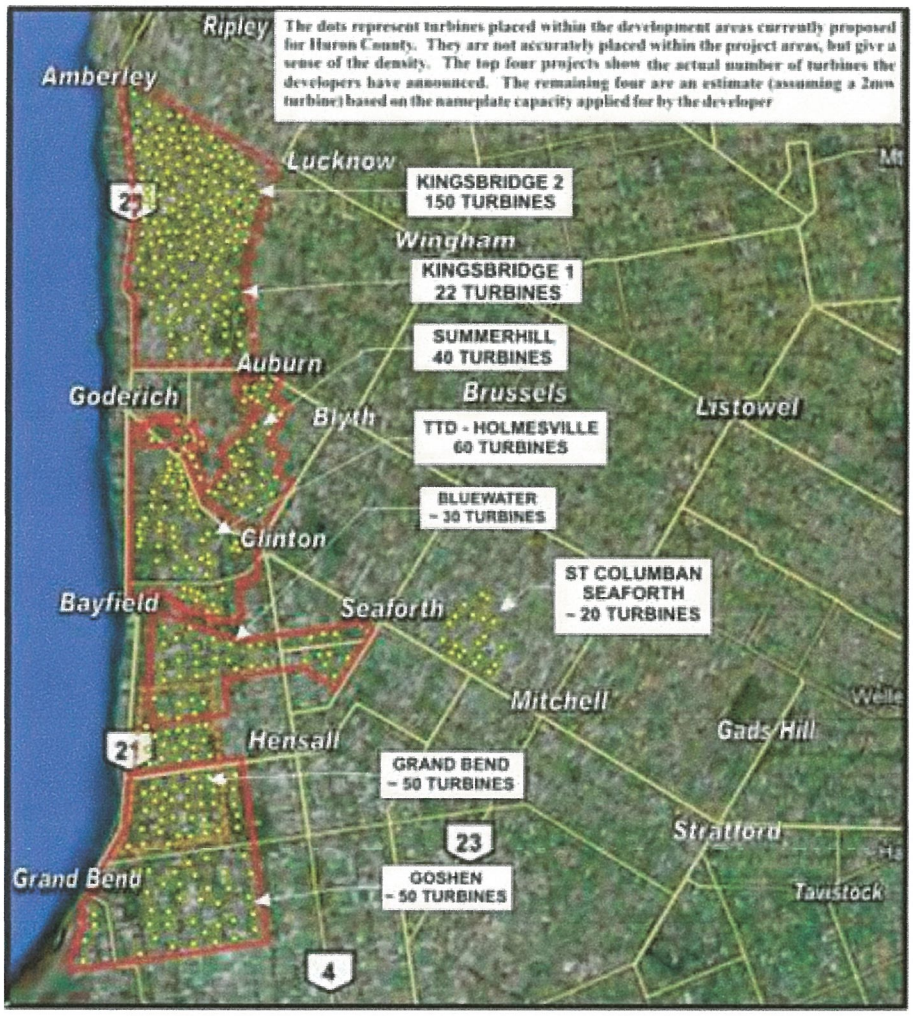
TOTAL Turbines = 6,736

Along Lake Huron 1915. For Further Information go to windpowergrab.wordpress.com

A larger version of this map can be found under Bruce County on the right.



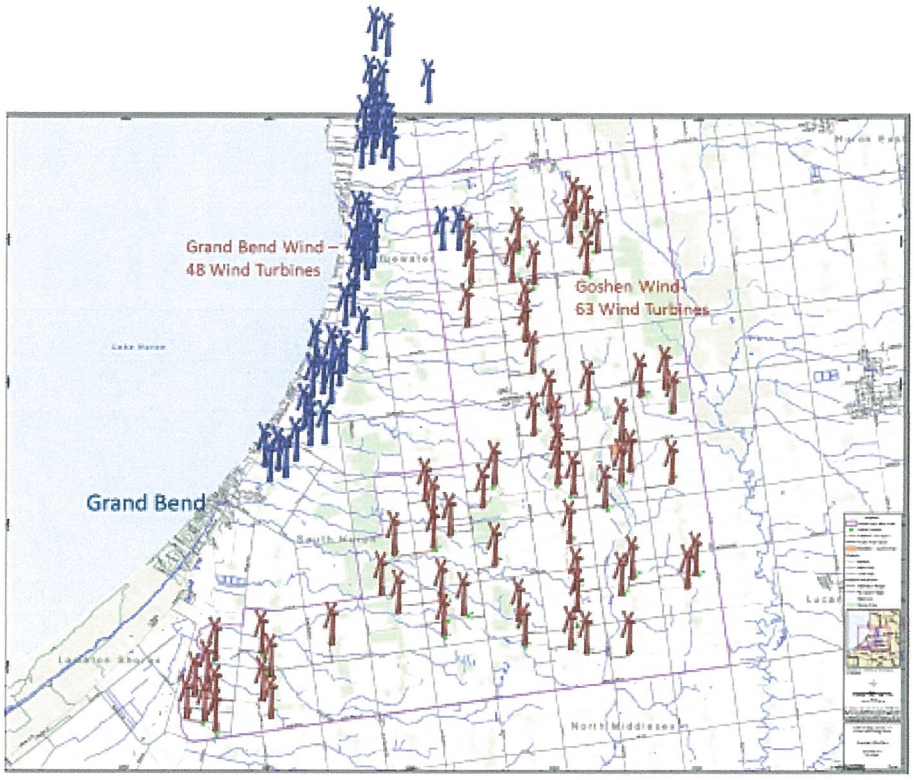
Here are interactive maps of wind projects in Middlesex County and Area, as well as Algoma & Thunder Bay districts. Below is a map of another of Ontario's 50 counties, districts & regional municipalities. It shows more than 400 turbines that have been built / proposed. You can create a map for your area using the data (above), which has been sorted by county.



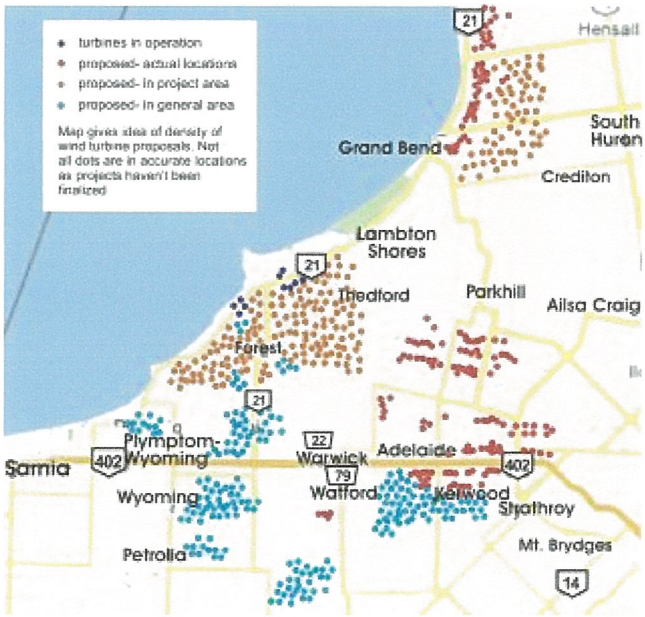
For a map of both Huron & Bruce counties, open this pdf file.

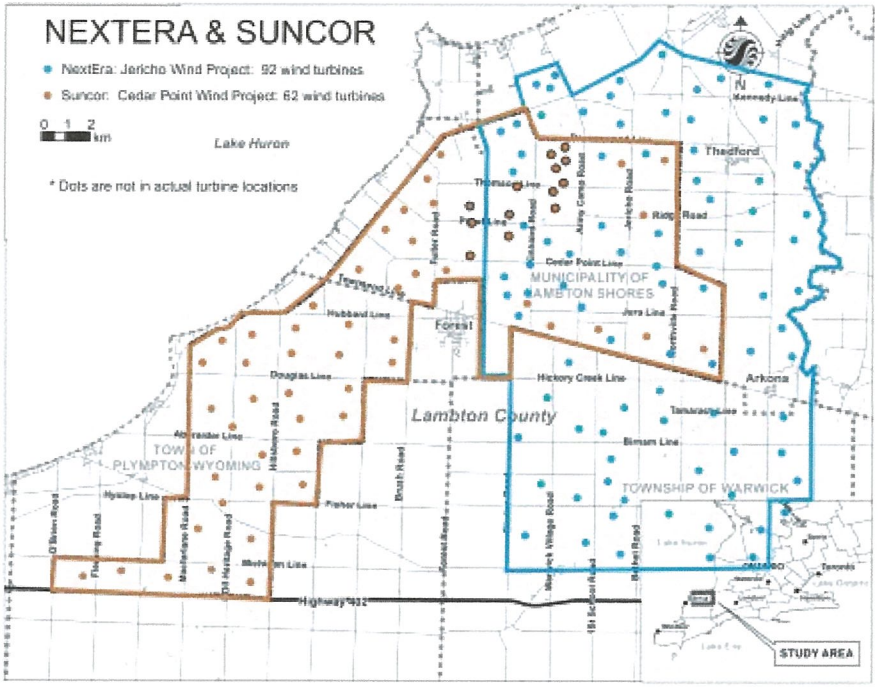
For a detailed map of southern Ontario, open this pdf file.

Grand Bend (Source: Middlesex-Lambton Wind Action Group)



A larger version of the following map can be found under Lambton or [Middlesex](#) on the right.

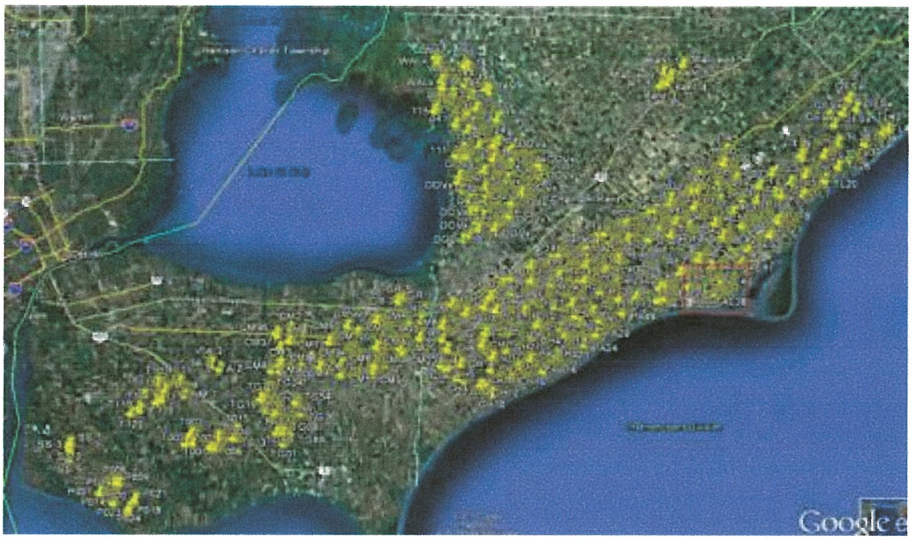




3 of the 23 industrial wind projects in Lambton & Middlesex counties:

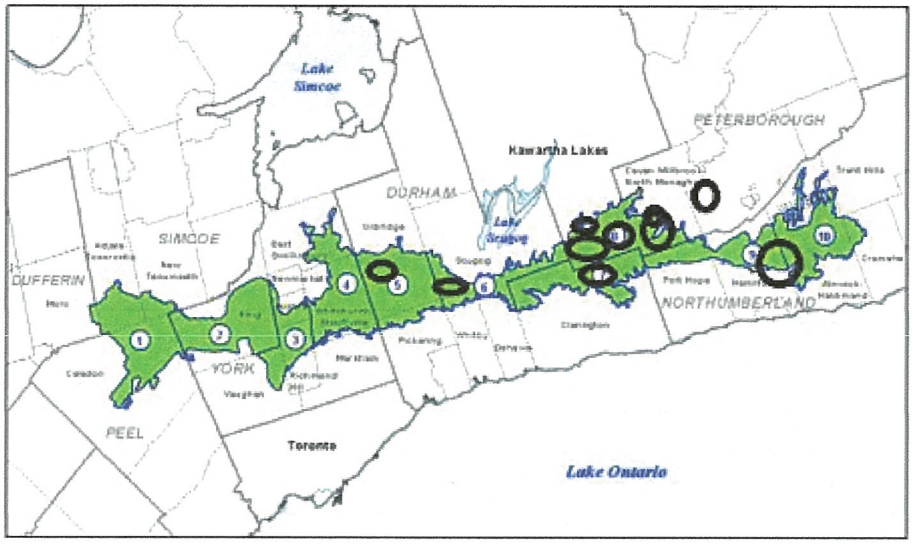
Figure 1

Chatham-Kent and Essex County:

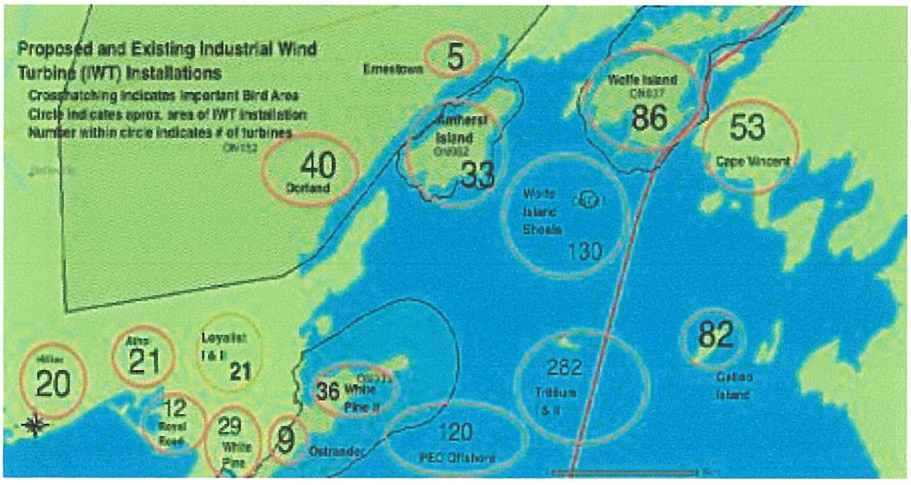


Haldimand County:

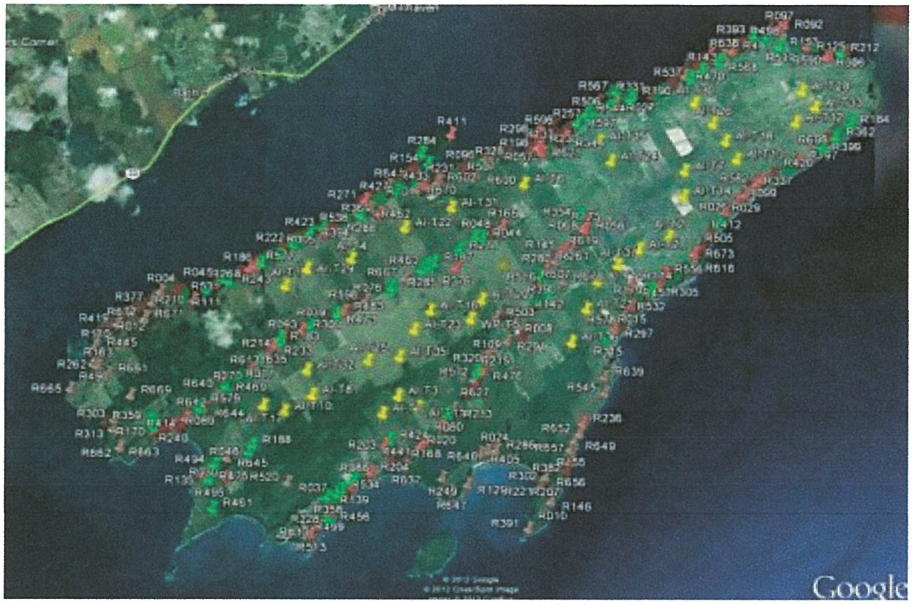
Oak Ridges Moraine – Source, pdf file



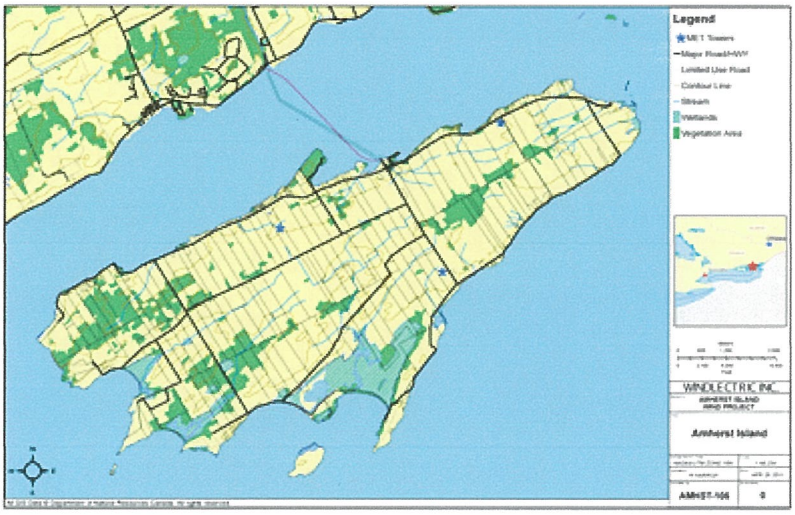
The map below was extracted from this 3 MB pdf file entitled Amherst Island – Biodiversity Threatened. More information can be found here: http://protectamherst.yolasite.com/



Source: Amherst Island Wind Info (Lennox and Addington)

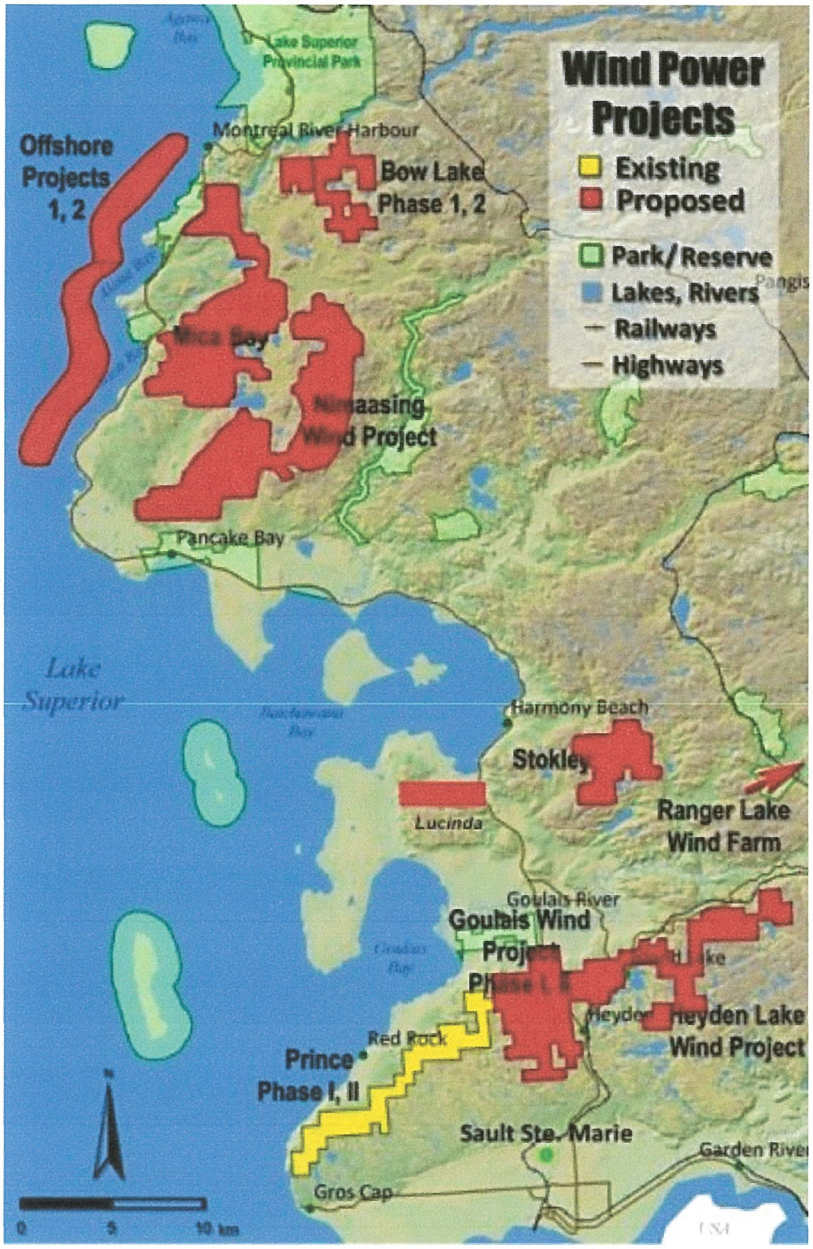


Amherst Island is in the ERT (Environmental Review Tribunal) at this time, another deeply flawed process to create the illusion that democracy still exists in Ontario. It really is a rubber stamp. This is again, highly critical habitat.



Turbines are planned beside the world famous Owl Woods. Located on the Atlantic Migratory Flyway, the Island is a refuge

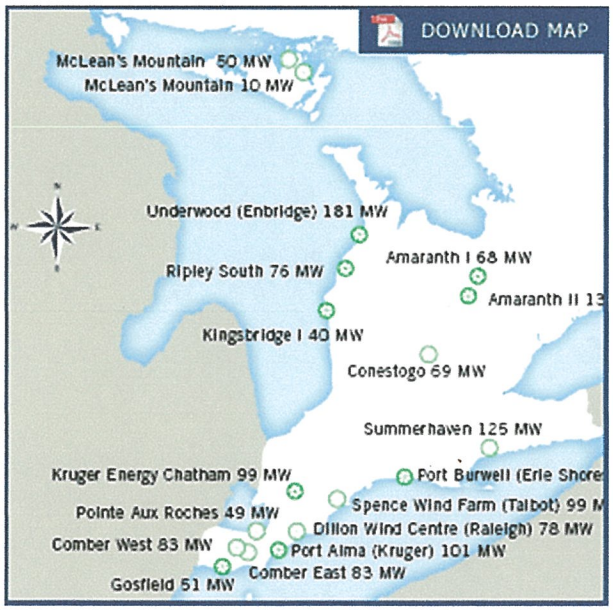
for 11 species of Owls, wintering raptors, and grassland birds. 34 Species at Risk will be impacted.



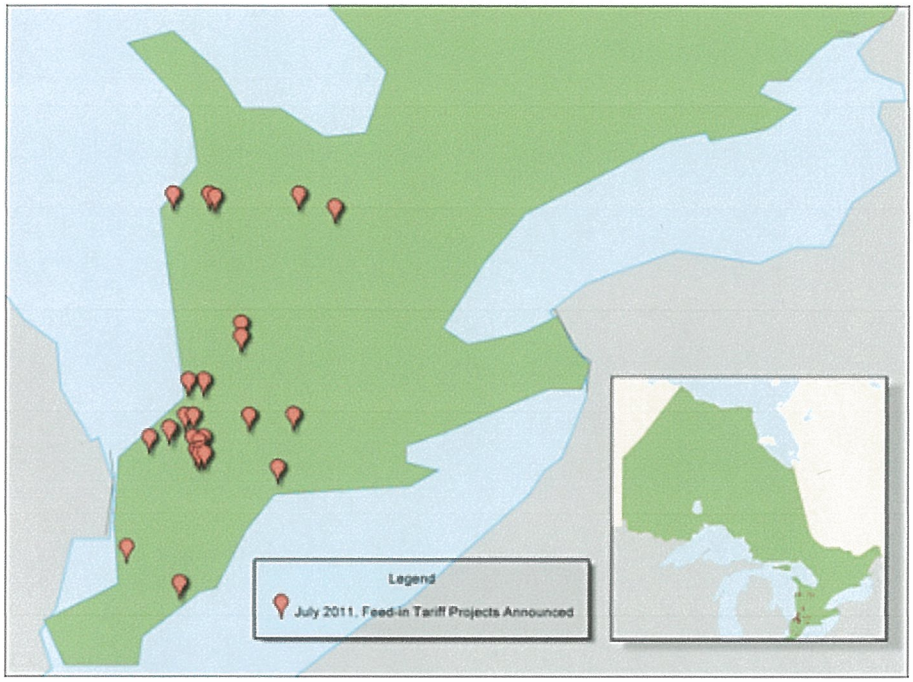
Lake Superior & surrounding area (Source):

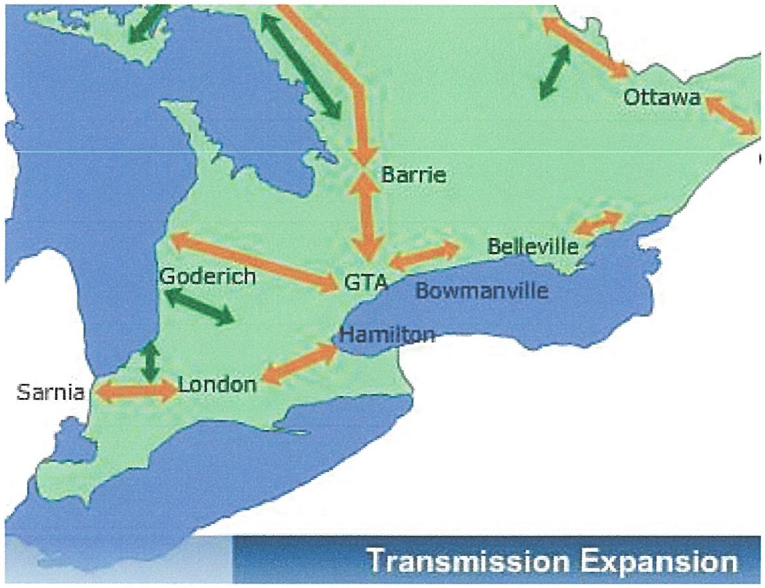
Above: Lake Superior turbines

Large-scale wind projects in operation or under development in Ontario. Click here to DOWNLOAD MAP of entire province (pdf format)



Map of contracts offered through Bruce to Milton capacity allocation process (Round 4):





The impacts on habitat loss will be felt for many generations. It is safe to say that existing and proposed turbines are massive killing fields for wildlife,

birds, and bats, as well as amphibians. Let's also calculate the loss of habitat, the number one reason on the planet for species depletions.

The Spanish Ornithological Society says that in that country between 6-18 million birds and bats were killed by industrial wind, by 18,000 turbines.

"Spain's 18,000 wind turbines may be killing 6 to 18 million birds and bats (1). The average per turbine comes down to 333 – 1,000 deaths annually, which is a far cry from the 2 – 4 birds claimed by the American wind industry, or the 400,000 birds a year estimated by the American Bird Conservancy for the whole United States, which has about twice as many turbines as Spain."

http://savetheeaglesinternational.org/new/us-windfarms-kill-10-20-times-more-than-previously-thought.html

"Bats are included in the Birdlife estimate, comments Mark Duchamp, president of Save the Eagles International (STEI). "Therefore, supposing for example that wind farms would kill twice as many bats as they do birds, the figures would be: 111 – 333 birds per turbine per year, and 222 – 666 bats per turbine/year. The mortality figures that were recorded in Germany and Sweden in the early nineties are not unusual after all", he notes. Quoting from a California Energy Commission study: **"In a summary of avian impacts at wind turbines by Benner et al. (1993) bird deaths per turbine per year were as high as 309 in Germany and 895 in Sweden."** 2)

http://savetheeaglesinternational.org/releases/spanish-wind-farms-kill-6-to-18-million-birds-bats-a-year.html

For Ontario, the mortality rates might then be about:

BIRDS PER YEAR 111-333 equals 854,700 to 2,564,100

BATS PER YEAR 222-666 equals 1,709,400 to 5,128,200

THESE ARE STAGGERING NUMBERS AND MAY WELL BE ON THE LOW SIDE.

Sent from my Samsung Galaxy smartphone.

-------- Original message --------

From: Nicholas Kouwen

Date: 2015-09-24 9:42 PM (GMT-05:00)

To: Leonard Van Den Bosch, Lorrie Goldstein, Bill Walker,

Cc: kodaisl@rogers.com

Subject: RE: Poisoned Wells after turbines go in

Len:

This is a mess. Do you or any neighbours have pre-development water test results?

It is important that everyone in the area gets their water tested including at some distance from the wt's where the water is still ok. If the wt's are the source or cause, the contamination will spread probably in the general direction the creeks & rivers are flowing so wells that are good now may get contaminated in the future. If a general path of progress away from the WT's can be established with regular tests it would make a strong case.

Ideally, all tests are done on the same day and repeated at least once a month, if not once a week at first.

Nick

From: Leonard Van Den Bosch
Sent: September-24-15 11:15 AM
To:

Cc: Nicholas Kouwen; Dave Hemingway; kodaisl@rogers.com

Subject: Poisoned Wells after turbines go in

Hi Dave, I just wanted to give you an update on what is going on here after the turbines went in and started running at the end of July.

Some people cannot sleep because their house vibrated inside. Must leave to sleep.

Neighbour with goat herd for 23 years says her goats are sick and some are dying.

Also, 3 neighbours around me had there water tested son it was contaminated with e coli and coliform. They said they never had a problem in over 30years. So I had my deep aquifer well tested.

You can read the results below in the letter I sent to my councillors.

I will keep you posted.

Hello Carol, I just got the results of a water test I did on the well on my property.

I need you to look into this urgent situation as I understand that Bev is looking after her father.

Carol, we made this well on our property about 17 years ago. The well driller said it was one of the best wells he had ever seen.

He said they the drill had droppers into a large chamber in the aquifer 150 feet down.

We had the water tested and it came back pristine. We have had many family members and friends come to the property over the years to fill their jugs with our pristine drink water.

Please remember that this is no ordinary well. We are pumping 150 gallons a minute into the lake on hot days.

We had a hydrological report done which showed that there is a huge source drinking water aquifer under our property.

We use this well to add addition water to the small lake we made to keep the trout healthy during the warm summer months.

Also, I have not been able to catch a single trout in my lake since the turbines went up.

This has never, ever happened before!

I received the water report back on Tuesday Morning in the mail. I have attached a copy below.

It shows that:

Total Coliform per 100ml = 68

total E coli per 100ml = 21

Interpretation:

UNSAFE TO DRINK, Evidence of Faecal contamination (E coli >0)

Also, my neighbour across the road had the same test results from a water test. The first time they ever had a problem in 32 years. My 2 neighbours next to my property had their water tested and they both had the same results. E coli, which they never had before.

So Carrol, it looks like putting in those 800 ton turbine bases right on top of our drinking water aquifers has poisoned the aquifer under my property just like I told them it could during my ERT hearings.

Carrol, I am not sure who you need to contact next or how you plan on handling this disaster but we need to get the word out to every citizen of West Grey around Priceville that could be impacted by this poisoned aquifer to get their water tested before they drink. I have already gotten sick from this poisoned water because I did not know I was drinking E coli.

I think the Ministry of the Environment needs to put out a news release to inform the citizens.

Please just make sure council does the responsible thing so it does not get blamed for another Walkerton tragedy. The provincial government did this. They are responsible.

The Attica Reservoir wind turbines and drinking water

Posted: Friday, January 23, 2009 1:00 am

By Joseph Zampogna

The clear waters of Crow Creek flow into and out of the Attica reservoir creating drinking water for the Attica area, including the Attica Correctional Facility. This important reservoir is principally located in the town of Attica. However, the southern portion of this pristine body of water extends into the town of Orangeville (Nesbitt, Buffalo, Krotz roads) which receives tax payments from the village of Attica on that portion of the reservoir.

Currently, some Orangeville property owners, whose land is located within the publicly designated Attica watershed for this reservoir, have signed land-lease agreements with the Invenergy Wind Energy Corporation (www.csoo.info). If the developer's proposed wind turbine setbacks are approved and permitted by the Orangeville Town Board (see addendum below),there will be several 400+ foot wind turbines erected well within this designated watershed area

Why should this be of concern to residents of the Attica area? Wind developers consistently claim that their product is safe and environmentally friendly. However, a recent summary of wind turbine accident data (www.caithnesswindfarms.co.uk) reveals a large number of accidents including blade failure, fire, lightning strikes, ice throw, human injury and fatalities. Of singular importance to aquifers, the planners of wind installations in Valencia, Spain, have noted the dripping and flinging off of motor oil and cooling and cleaning fluids from wind turbines, pointing out that each I.5 MW turbine contains several hundred gallons of oil. (Rosenbloom@www.aweo.org). In fact, in West Martinsburg, N.Y. at least one water well was contaminated by a 491 gallon oil spill from a wind farm transformer explosion and fire. (Watertown Daily Times, Dec. 29, 2007).

Furthermore, while neglecting environmental concerns, the Invenergy developers inappropriately used some 45,000 tons of donated steel slag from the defunct Lackawanna Steel site as a road base in developing the Sheldon wind farm. The heavy metal content of this slag is known to cause ground water contamination. (gcramer@aol.com)

Additionally, the problem of mercury pollution associated with wind projects is rarely mentioned. However, it is a known fact among environmental experts that the production of concrete generates large amounts of mercury released from the limestone used as raw material; the median amount being 1.5 lbs. of mercury per ton of concrete. Each turbine base requires over a million lbs. (approx. 446 tons) of concrete. Do the math! (Sullivan, J. The Empire Page, Dec. 13, 2008)

Wyoming County is located along the Attica Fault Line. As reported, on Aug. 12, 1929, extensive damage occurred in the Attica area from a strong earthquake shock (intensity 7). "An increased flow at the Attica reservoir was noted for several days after the earthquake; a number of wells went dry." (http//earthquake.usgs.gov/regional/states/newyork/history.php). This same government report also documents a magnitude 4.7 disturbance on Jan. 1, 1966, which caused damage in the Attica and Varysburg areas.

Although natural disasters are beyond man's control, it is vitally important that our elected decision makers take every possible precaution to avoid or minimize the man-made effects of mother nature's unpredictable behavior. Wind turbines erected within the designated public watershed of the Attica reservoir have the real potential of an accident waiting to happen. The effects of an earthquake, a lighting strike, an oil spill, mercury, or brown slag contaminants leaching into the aquifer within this water shed would cause serious and permanent harm to the source of drinking water for many Wyoming County residents.

The Attica reservoir is designated as one of 28 class "A" reservoirs in the State of New York (newyorkhometownlocator.com). This class "A" reservoir is under the jurisdiction of the Attica Village Town Board which is empowered to set policy and establish procedures on all aspects related to protecting this valuable source of drinking water. Historically, these town officials have exercised exceptional diligence in protecting the reservoir and maintaining the natural environment that surrounds this important body of water. However, the proposal for construction of industrial wind turbines within the publicly designated Attica watershed poses a new and unique challenge that Attica village officials must seriously address. Hopefully, their deliberations and decisions will be guided by a most recent New York State Supreme Court decision (Hon. David Michael Barry, Jan. 9, 2009) which "set aside and annulled" the Monroe County Town of Hamlin wind energy law because it violated the State Environmental Quality Review Act (SEQRA) as it neither took a "hard look" at the relevant areas of environmental concern nor set forth a "reasoned elaboration" for its determination that the wind energy law would not have a significant impact on the environment. The Hamlin Town Board chose to ignore the recommendations of the town's Wind Energy Committee for 1,500 foot setbacks from roads and property lines, and 2,640 foot (half-mile) setbacks from residences.

As expressed by the plaintiffs' attorney, ... " industrial wind development must, at a minimum, protect its residents' health, maintain the town's rural character, and preserve property values by establishing meaningful setback requirements and noise standards." (ajglaw@verizon.net).

Enforcement of this Supreme Court decision in Orangeville, as well as on the perimeters of the Attica reservoir, along with an adoption of the Hamlin wind energy committee's recommended setback requirements, will effectively eliminate any potential damage that could occur to the Attica reservoir through industrial wind turbine development and its proven environmental liabilities.

(A personal addendum: Our family property is located within the publicly designated watershed for the Attica reservoir. In October 2008, this writer, his wife and family were approached by a representative from the Invenergy Corporation requesting that we sign a setback waiver "compensation" agreement permitting wind turbine construction as close as 1,000 feet from our residence or 150 feet from our property line. Curiously, the Orangeville Town Board has not yet made public its new setback requirements. Our family and our attorney retain an unsigned copy of this agreement.)

Dr. Joseph A. Zampogna lives in Orangeville.

http://thedailynewsonline.com/blogs/commentary_and_letters/article_0527bd4a-7a9c-5704-9eec-f7b562a36741.html

https://news.ontario.ca/ene/en/2011/01/protecting-drinking-water-sources-across-the-province.html

Archived News Release
Protecting Drinking Water Sources Across The Province
McGuinty Government Invests In Safeguarding Drinking Water

January 26, 2011 9:00 A.M.

Ministry of the Environment and Climate Change

Ontario is helping farmers, property owners and businesses across the province take action to protect local drinking water.

In the past three years, the Ontario government has helped more than 2,000 projects remove risks to local drinking water sources, including: inspecting and upgrading more than 1,000 septic systems and closing or upgrading more than 480 wells.

Measures like this help prevent water contamination. It also helps protect this valuable resource so Ontario families can continue to have access to safe, high quality drinking water.

This program is an important part of the government's Open Ontario Plan to make Ontario a leader in water protection and technology.

Quick Facts

- In May 2010, Ontario introduced the Water Opportunities Act, to make Ontario North America's leader in clean water technology.
- Protecting source water is the first line of defence in Ontario's multi-barrier approach to safeguarding drinking water. The Clean Water Act sets the

legal framework for communities to develop plans to protect their sources of municipal drinking water.

- This year the province is investing $7 million in the Drinking Water Stewardship Program, which will support hundreds more projects.
- The Drinking Water Stewardship Program also supports research, such as Fleming College's study of floating island technology to reduce drinking water threats posed by storm water ponds. Since 2005, the government has invested more than $175 million to protect drinking water sources.
- Since 2005, the government has invested more than $175 million to protect drinking water sources.

Background Information

- Helping Communities Safeguard Drinking Water

Additional Resources

- Find out more about how you can apply from your local conservation authority.
- Learn more about the Clean Water Act and source protection planning.
- Get details about past projects.
- Learn more about the Water Opportunities Act.

Quotes

"Safe, clean drinking water is vital to our health and economy. That is why we are helping Ontarians take measures to protect their sources of drinking water."

John Wilkinson

Minister of the Environment

"We all have a shared responsibility for protecting our drinking water. The work that is being done here in the Lindsay area will help our community protect drinking water sources for years to come."

Rick Johnson

MPP Haliburton-Kawartha Lakes-Brock

“We are making it easier for people in the Peterborough area and across the province to help reduce risks to local water sources. Protecting sources is the very important first step in keeping our drinking water clean and safe.”

Jeff Leal

MPP Peterborough

“Almost all 36 conservation authorities collaborate with the province to deliver the Ontario Drinking Water Stewardship Program. Through our partnership we work directly with landowners and businesses to implement best management practices, prevent or reduce threats to drinking water and raise public awareness about the importance of protecting water sources.”

Dick Hibma

Chair, Conservation Ontario

Oct 30, 2014

Opposition leader Jim Wilson slams Dufferin Wind

Wind troubles?

Bill Tremblay

Dufferin-Caledon MPP Sylvia Jones, interim leader of the Official Opposition Jim WIlson and Melancthon Mayor Bill Hill toured north Dufferin COunty on Friday (Oct. 17).

Orangeville Banner

By Bill Tremblay

The Green Energy Act's ability to trump other legislation is a problem across Ontario, but Melancthon is home to a worst case scenario according to Jim Wilson, interim leader of the Official Opposition.
Wilson, a Progressive Conservative MPP for Simcoe-Grey, joined Dufferin-Caledon MPP Sylvia Jones and Melancthon Mayor Bill Hill for a tour of wind farm installations in north Dufferin on Friday (Oct. 17).
"I think this is the worst case I've seen and I've been on a number of tours of wind farms," Wilson said.
Dufferin Wind, and its construction of a 230 kV transmission line from its 49-turbine wind farm drew the most criticism from the interim leader.

Wilson questioned the company's placement of utility poles and the possibility of ground water contamination.

Earlier this summer, the Ministry of Environment (MOE) asked Dufferin Wind to revise those plans after a local resident argued some of its utility pole foundations could act as conduits for surface water pollutants to enter the groundwater supply.

"As a former minister of the environment, I can't believe they're getting away with not putting the poles in the ground properly and properly protecting the environment and ground water," Wilson said. "You don't have a very good corporate citizen in terms of Dufferin Wind. It is disappointing what we've seen." For Dufferin Wind, the company would have liked to join Wilson on the tour.

"It is regrettable that Dufferin Wind Power was not asked to participate in the tour so that we could provide more up-to-date and accurate information, especially regarding Mr. Wilson's environmental concerns," said Dufferin Wind spokesperson Connie Roberts. "It seems he was not given the latest, or the most accurate, information."

Roberts noted the company's 306 utility poles have provincial approval and exceed regulations.
"These mitigation actions by Dufferin Wind Power show an abundance of caution to prevent a very unlikely event, and we can find no other instance in the province of Ontario of another power installation that is taking the same precautionary measures," Roberts said. "In my mind, that is just one example of being a good corporate citizen. At every step of the way DWP has been scrutinized and has met every legislative requirement for this project."

Dufferin Wind has agreed to address the possibility these caissons could transfer surface pollutants, such as fertilizers, into the bedrock.

"The ministry has found no evidence to suggest that negative impacts to the local potable water aquifer are occurring," MOE spokesperson Kate Jordan said in a previous email to The Banner.

Wilson claimed projects like wind farms are able to use the GEA to defeat other regulations.
"If it's a wind project or a project under the Green Energy Act, everything else of common sense gets ignored in the government," he said.

Wilson also claimed the Green Energy Act is designed to override the rights of municipalities.
"They can tell you where to put your shed, but they can't tell you where to put a 150-metre high wind turbine," he said.

Ironically, Wilson was the first Minister of Energy to introduce windmills to Ontario.
"We're not against renewable energy as the PC Party, but our policy has always been these things should only be located in communities where they're welcome and wanted," he said.
The tour of Melancthon will help fuel a drive to reintroduce private members bills to return planning rights to municipalities.

"(The Liberal Government) doesn't want to change the Green Energy Act. We have to make them

understand there are repercussions," Jones said. "Lets make sure they don't override other legislative protections."

Seeing those private members bills become law won't be an easy task, Jones admitted.
"I don't delude myself when we have a Liberal majority government that they will change their philosophy," she said.

Special Investigation: Toxic wind turbines

https://www.sundaypost.com/news/scottish-news/special-investigation-toxic-wind-turbines/

Written by Reporter, 23/03/2014

Part Two of The Sunday Post's hard-hitting probe into the true impact of wind farms.

Damning evidence of wind farms polluting the Scottish countryside can today be revealed by The Sunday Post.

Scotland's environmental watchdog has probed more than 100 incidents involving turbines in just six years, including diesel spills, dirty rivers, blocked drains and excessive noise.

Alarmingly, they also include the contamination of drinking water and the indiscriminate dumping of waste, with warning notices issued to a handful of energy giants.

The revelations come just a week after our investigation showed

£1.8 billion in Government subsidies have been awarded to operators to build turbines since Alex Salmond took office in 2007.

Anti-wind farm campaigners yesterday insisted Scotland's communities are now "under siege" and demanded an independent inquiry into the environmental damage.

Murdo Fraser MSP, convener of Holyrood's Economy, Energy and Tourism Committee, said: "I am both surprised and concerned by the scale of these incidents.

"The fact there were more than 100 complaints is a dismal record.

"This should serve as a wake-up call that wind energy is not as clean and green as is being suggested."

He added: "What's worse is that the current Scottish Government seems to have an obsession about wind power and the expansion in the number of turbines shows no signs of relenting any time soon."

Promotion of green energy, particularly the growth of onshore and off-shore wind farms, has been one of the SNP's key policies since 2007.

The Scottish Government's target is to generate the equivalent of 100% of the country's electricity consumption, and 11% of heat demand, from renewables by 2020.

In recent years, ministers have invested heavily in the sector, insisting Scotland has a quarter of all of Europe's wind energy potential.

But wind power is becoming increasingly unpopular, with giant turbines now scattered across much of the Scottish countryside.

There are now 219 operational wind farms in Scotland, with at least 2,400 turbines between them.

Moray has the most sites, with 20 in operation, while Orkney has the most turbines, with 600 across the archipelago, although the majority are owned by farmers and other individuals.

Now, we can reveal the Scottish Environment Protection Agency has investigated 130 'pollution reports' connected to wind farms or turbines over the past six years. In June 2012, elevated levels of the banned insecticide Dieldrin were found in samples from a private drinking water supply in Aberdeenshire.

A redacted SEPA report, obtained under Freedom of Information, states: "It was noted a wind turbine had recently been erected by the nearby farmer."

Run-off from the construction of a wind farm near Loch Fyne in February 2012 caused concern that fish had stopped feeding, with SEPA officers discovering a burn was "running brown" and that "a noticeable slick on Loch Fyne was visible".

In another incident in November 2011, 1,000 litres of oil leaked from a turbine at the Clyde wind farm in Abington, Lanarkshire, resulting in an emergency clean-up operation.

Warning letters have been sent by the environment agency to a number of operators, including Siemens, after another fuel spill at the same 152-turbine site four months later.

A report on that incident states: "Siemensmaintained it was under control. Howeveroperators who then visited the area did not see any action being taken and fuel ponding at the base of the generator".

A warning was issued to Scottish and Southern Energy in February 2011 after the Tombane burn, near the Griffin wind farm in Perthshire, turned yellow as a result of poor drainage.

The same firm was sent another letter in June that year after SEPA found high levels of silt in a burn near a wind farm in Elvanfoot, Lanarkshire.

Officers also then discovered "significant damage" to 50 metres of land and found "the entire area had been stripped of vegetation" as a result of unauthorised work to divert water.

Other incidents investigated since 2007 include odours, excessive noise from turbines and heavy goods vehicles and the indiscriminate dumping of waste and soil.

Dr John Constable, director of the Renewable Energy Foundation, a charity that publishes data on the energy sector, said: "The new information from SEPA deepens concerns about the corrupting effect of overly generous subsidies to wind power.

"Many will wonder whether wind companies are just too busy counting their money to take proper care of the environment."

Linda Holt, spokeswoman for action group Scotland Against Spin, said: "A lot of environmentalists actually oppose wind farms for reasons like this. If you go to wind farms they are odd, eerie, places that drive away wildlife, never mind people.

"The idea they are environmentally-friendly is not true they can be hostile. We have always suspected they can do great harm to the landscape and now we have proof."

Officials at SEPA stressed not all 130 complaints were found to be a direct result of wind farms, with some caused by "agricultural and human activities" near sites and others still unsubstantiated.

A spokesman added: "While a number of these complaints have been in connection with individual wind farms these are generally during the

construction phase of the development and relate to instances of increased silt in watercourses as a result of run-off from the site.

"SEPA, alongside partner organisations, continues to actively engage with the renewable energy industry to ensure best practice is followed and measures put in place to mitigate against any impact on the local water environment."

Joss Blamire, senior policy manager at Scottish Renewables, insisted the "biggest threat" to the countryside is climate change and not wind farms.

He added: "Onshore wind projects are subject to rigorous environmental assessments. We work closely with groups, including SEPA, the RSPB and Scottish Natural Heritage to ensure the highest conservation and biodiversity standards are met."

The revelations come just months after evidence emerged of contamination in the water supply to homes in the shadow of Europe's largest wind farm.

People living near Whitelee, which has 215 turbines, complained of severe vomiting and diarrhoea with water samples showing high readings of E. Coli and other coliform bacteria.

Tests carried out between May 2010 and April last year by local resident Dr Rachel Connor, a retired clinical radiologist, showed only three out of 36 samples met acceptable standards.

Operators ScottishPower denied causing the pollution, but admitted not warning anyone that drinking water from 10 homes in Ayrshire was, at times, grossly contaminated.

Dr Connor said: "I would expect this likely contamination of drinking water must be happening all over Scotland.

"If there is not an actual cover-up, then there is probably complacency to the point of negligence by developers and statutory authorities."

(OUR EMPHASIS)

Duke Energy's Shirley Wisconsin Wind Development a "Hazard to Human Health" Declares Brown County Board of Health October 14, 2014.

The Brown County Board of Health voted tonight to declare the Shirley Wind Turbine Development a Human Health Hazard.

The decision was based on a report of a year-long study conducted by the Enz family with assistance from Mr Rick James to document acoustic emissions from the wind turbines including infrasound and low frequency noise, inside homes within a radius of 6 miles of the Shirley Wind turbines.

The wording of the motion was as follows:

"To declare the Industrial Wind Turbines in the Town of Glenmore, Brown County. WI. a Human Health Hazard for all people (residents, workers, visitors, and sensitive passersby) who are exposed to Infrasound/Low Frequency Noise and other emissions potentially harmful to human health."

The context is in reference to Brown County Code 38.01 in the Brown County Ordinances, in Chapter 38, relating to Public Health Nuisance (section (b) Human Health Hazard).

"Human Health Hazard" means a substance, activity or condition that is known to have the potential to cause acute or chronic illness or death if exposure to the substance, activity or condition is not abated.

The vote to declare it a Human Health Hazard now puts Duke Energy's Shirley Wind Development on the defensive to prove to the Board they are not the cause of the health complaints documented in the study, and could result in a shut down order.

Read the Brown County Ordinances
- http://www.co.brown.wi.us/departments/page_c581ca2d560f/?department=e4cd9418781e&subdepartment=3810f83bcbd2

Download the Brown Country Ordinance Chapter 38 — Public Health Nuisance

Additional Background Information

In **January 2012**, the Brown County Town Board of Health called for emergency state aid for families suffering near wind turbine developments. http://waubrafoundation.org.au/resources/emergency-aid-sought-for-families-suffering-around-wind-turbines/

The Duke Energy Shirley Wind Development was also the site of the **December 2012** Cooperative Acoustic Survey by Acoustic consultants Schomer, Walker, Hessler, Hessler and Rand. http://waubrafoundation.org.au/resources/co-operative-measurement-survey-analysis-low-frequency-infrasound-at-shirley-wind-farm/

On **21st January, 2013**, the Wisconsin Towns Association Board of Directors adopted a resolution that the Wisconsin State and the Wisconsin Public Service Commission should enact a moratorium to"*stop the permitting and installation of industrial wind turbines until further studies are done, solutions are found, and the State's wind siting rule (PSC 128) is modified to implement standards that address ultra-low-frequency sound and infrasound from wind turbines that will protect the health and safety of residents*". http://waubrafoundation.org.au/resources/wisconsin-towns-association-resolution-enact-moratorium-wind-farms/

As Dr Paul Schomer pointed out in his conference paper in **August 2013**, Duke Energy chose to refuse to cooperate with the request from the acoustic consultants conducting this groundbreaking cooperative acoustic survey to participate in "on off" testing. http://waubrafoundation.org.au/resources/schomer-et-al-wind-turbine-noise-conference-denver-august-2013/

Mr Rick James, Noise Engineer, gives some detail about some of the acoustic testing in Wisconsin which he has conducted in his opening statement of evidence to the Bull Creek appeal in Alberta Canada in **November, 2013** http://waubrafoundation.org.au/resources/james-

richard-r-opening-statement-nov-18–2013-bluearth-project-bull-creek-alberta/

Dr Jay Tibbetts is a local medical practitioner with first hand experience of treating wind turbine noise affected residents in Brown County, including from the Shirley Wind Development, and he shared his experiences in his letter to the Australian AMA in **March 2014**. http://waubrafoundation.org.au/resources/tibbetts-dr-jay-j-md-appalled-at-ama-statement/

Information from impacted residents

Wind turbine host Dick Koltz speaks candidly about what his experiences were as a wind turbine host in Brown County, Wisconsin and openly expresses his regrets to signing up with the wind developer. http://waubrafoundation.org.au/resources/video-brown-country-wisconsin-wind-turbine-host-speaks-out/

There is additional testimony about the experiences of numerous families in Brown county living near the Shirley Industrial Wind Development here: http://waubrafoundation.org.au/resources/video-shirley-wind-project-wisconsin-usa/

Posted on: 15 October 2014. Category: Action by Responsible Authorities, General News. Tags: Brown County, Duke Energy, Shirley Wind Development, Shirley Wind Farm, Wisconsin.

North American Platform Against Windpower

For Immediate Release:
March 22, 2016

NAPAW CALLS BEHAVIOR OF HEALTH OFFICER CHUA XIONG DISGRACEFUL. Calls for a full public enquiry. Prior to papering her final decision that there were "no links between human health effects and turbines," Xiong in an FOI refers to needing Tylenol as a preventative for migraines she gets while visiting the Shirley Wind Project, Glenmore, Brown County, WI.

"Carolyn the times I have been out there by the Wind Turbines, I get such migraine headaches. I think I should take some preventative Tylenol before I head out there."

This, and then following, a mere month later, Ms. Xiong's assertions and papering of an opinion that there are no ill health effects possible from industrial wind, specifically the Shirley project, where there has been an almost Biblical recording of human suffering. Ms. Xiong made her astonishing declaration that there is

"currently" no scientific based research or evidence to indicate negative health impacts from industrial wind projects. Ms. Xiong completely ignored the sworn affidavits representing over 50 ill residents, recorded over a year, meticulously gathered and coorelated to studies, and also referenced to significant peer reviews; she agreed only to monitor "annually." This decision was "final," she indicated. This "out of reality" decision despite the fact that the Board of Health had admonished that afflicted families should benefit from immediate emergency aid/housing.

It was apparently irrelevant to this officer of health that the families of Brown County prepared sworn affidavits and documented past and continued migraines and ill health, and that the Board of Health's assessment was that the project was indeed a "public health hazard." Ms. Xiong's categorical oppositional judgement and negation of their obvious turbine impacts, has left residents reeling.

Migraines are commonly accepted symptoms of proximity to industrial wind projects as pointed out by Swedish Otoneurologist, Dr. Hakan Enbom. The famed American paediatrician, Dr. Nina Pierpont, has also identified three risk or susceptibility factors of Wind Turbine Syndrome, notably, one being migraines.

The impact of the discovery of the FOI documents related to the behaviour and decisions of Ms. Xiong, some of which implicate incorrect and even possible fraudulent statements in research, and certainly which negate the relatively well known impacts and documentation on ill health world wide, is enormous. "Why," said Sherri Lange of NA-PAW, "is this in your face "lie" allowed to stand without

scrutiny in law?" "Why would residents have any faith at all in their ability to trust health professionals of this kind?"

Health officers have the responsibility to "optimize" positive health over lifespans, for residents. From its website: "*The Brown County Health Department protects and promotes individual and community health through education, regulation and leadership to empower community members to attain well-being across the lifespan."*

Given the abject failure of this Officer of Health to perform duties, we ask the Legal department of Brown County to examine the Charter, conduct a survey of the conduct of Ms. Xiong and any other related parties in the Health Department, who by their actions and non actions are increasing the depth of suffering of the residents of Brown County. We request that afflicted residents be compensated until such time as the offending wind project is removed or mitigated to the satisfaction of residents. NA-PAW further calls for a full and open public enquiry into the process and activities followed by Ms. Xiong and her staff.

"The time when officers of health can irresponsibly re-create human health history in their own pro wind bias, possibly under guidance or influence of the industry itself, ignore the impacts recorded in human bodies by the victims themselves, and use bogus literature reviews, and arrogant statements that have no basis in fact whatsoever, are done. It is time for these custodians of human health to step up and protect, not negate, ignore, and obfuscate." added Lange, " Or let them face the legal implications of this behavior. "Let it be further noted," Lange said,

"that aiding and abetting, if there has been this, may be prosecuted and punishable as if the person has directly committed an act."

Mr. Jim Vanden Boogart, President of Brown County Citizens for Responsible Wind Energy (BCCRWE), told NA-PAW: "On behalf of BCCRWE I submitted 85% of the many scores of credible documents to Ms. Xiong. I can confidently assure you that her review process, the work product that resulted, and her conclusion are wholly without merit and contrary to the evidence she had at her disposal".

NA-PAW encourages the complete exposure of all the facets of this neglect of duty by Ms. Xiong, with the benefit of the enquiry. "This story of obfuscation is not new in a Health Department with respect to industrial wind, sadly. It may be, however, the most recently exposed, and one of the most flagrantly arrogant and incompetent examples to date."

CONTACT:

Sherri Lange
CEO NA-PAW (North American Platform Against Wind Power)
www.na-paw.org
kodaisl@rogers.com
416 567 5115

Jim Vanden Boogart
President: Brown County Citizens for Responsible Wind Energy
leadershipteam@bccrwe.com

Resources

CLICK HERE to see other news coverage about the Brown Co. Board of Health's "Human Health Hazard" declaration

CLICK HERE to read more about Brown County Actions concerning Duke Energy's Shirley Wind Industrial Wind Project

http://www.co.brown.wi.us/departments/?department=fd7fb6bc484c

https://www.municode.com/library/wi/columbus/codes/code_of_ordinances?nodeId=MUCO_CH1GEPR_S1-24FAOFPEDU

http://www.bccrwe.com/index.php/8-news/24-county-health-officer-admits-feeling-ill-when-near-dukes-shirley-wind-turbines

https://www.dhs.wisconsin.gov/dph/bchp.htm

http://windvictimsontario.com/analysis-of-low-frequency-and-infrasound-at-the-shirley-wind-farm.html

http://waubrafoundation.org.au/resources/ama-statement-responses-concerned-professionals-citizens-impacted-residents/

http://waubrafoundation.org.au/resources/dr-nina-pierpont-submission-australian-senate-inquiry/
http://waubrafoundation.org.au/resources/emergency-aid-sought-for-families-suffering-around-wind-turbines/

Additional Information

Some video material recording the effects on the residents of Shirley Wind, Brown County, Wisconsin.

Cappelle Family

http://www.youtube.com/watch?v=QxOV0LRsAR4

Schauer Family

http://www.youtube.com/watch?v=MapOhiaPhIU

Tenor Family

http://www.youtube.com/watch?v=m4w9NyK_7L4

Ashley Family

http://www.youtube.com/watch?v=vBaOEqS3f1U

Ashenbrenner Family

http://www.youtube.com/watch?v=gYZuggVPU3I

Each video includes an earlier and a later video recording of the same family, with the later recording being a follow-up update made 1-2 years after the earlier video.

Here's an overview of each family:

Cappelle Family:

Home located 1300 feet from closest wind turbine Abandoned their home due to health impacts. Moved into a small home in a local community, while continuing to pay taxes, utilities, and mortgage on the abandoned home. Could not sustain the economic burden, so eventually had to try to sell their home, which was their grandparent's homestead. Could not find a buyer, eventually sustaining large financial loss when bank foreclosed on the home and sold at sheriff's auction.

Schauer Family:

Home located 2600 feet from closest wind turbine Continue to live in affected home and seek refuge in basement for partial relief. Children are adversely affected.

Tenor Family:

Home located 2000 feet from closest wind turbine Continue to live in affected home due to financial inability to move out. Wife used to be very strong woman, hunting deer at over 60 years of age. Now is a shell of her former person. Husband also adversely affected.

Ashley Family:

Home located 8300 feet from closest wind turbine All family members adversely affected. Moved into a small home in a local community, while continuing to pay taxes, utilities, and mortgage on the abandoned home.

Continue to live as wind refugees waiting to return to the home they love. Are only able to return to wind project home for short periods of time due to sensitization to IWT emissions.

Ashenbrenner Family:

Home located 6000 feet from closest wind turbine Ran family dairy farm with assistance from father who previously ran it for decades. Lost significant portion of herd following Shirley Wind turbine startup - cows, calves, and breeding bull Eventually had to sell remaining herd due to economic inability to continue dairy operation with reduced herd . Currently works several jobs to make ends meet after losing dairy farm operation.

Also:

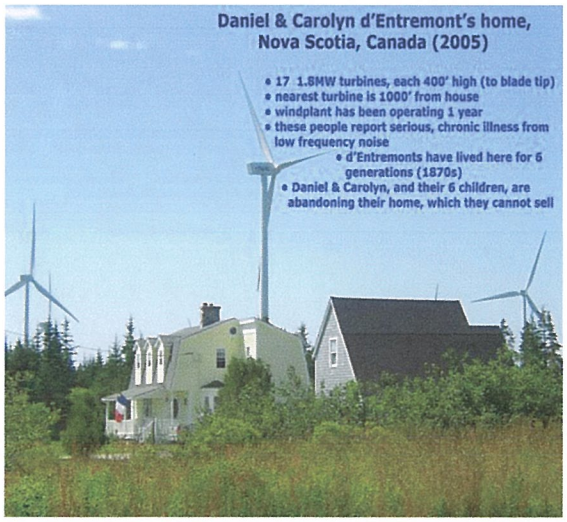
One other family, not recorded, the Enz Family, has been living as wind refugees in their RV for over 5 years while waiting to return to the home where they raised their family and hoped to live out their retirement years, but had to abandon due to severe heath effects from 4 nearby wind turbines. Home located 3200 feet from closest wind turbine.

North American Platform Against Windpower

MEDIA RELEASE
October 16, 2014

BOOKEND HEALTH ISSUES TURBINES: Existing project in Glenmore WI (Brown County) formally declares its Duke's "Shirley Wind" project a "health hazard", and Mayor Lonny Napper and council in Plympton Wyoming, Ontario, anticipating several projects, create a revolutionary bylaw that includes ILFN (Infra and Low Frequency Noise) penalties

By Sherri Lange



Plympton Wyoming, Ontario, Mayor Lonny Napper is astonished. "With all the available evidence from around the world about the effects of Low Frequency and Infrasound from industrial wind turbines, it amazes me that the alarms are not sounding earlier and stronger."

With about 1,000 acres of prime land under lease for turbine development, signed up between willing hosts and developers, this council is fighting to protect its citizens' health. A new bylaw signed and completed third reading, October 8th, 2014, sets a new and interesting precedent by mentioning and effecting fines for health impairing ILFN. ILFN is well known to be an industrial plague, now

exacerbated by industrial wind turbines that plague every corner of the globe, **without,** as is now acknowledged widely, producing viable, reliable or "green," energy.

In Glenmore WI, the Health Department in Brown County, almost simultaneously with the efforts of the Mayor of Plympton Wyoming and CAO, Kyle Pratt, and council, declares that the Shirley Wind Project, containing some of the largest turbines in the US, is already the site of an industrial human health hazard.

> "On Monday night, the Brown County Board of Health in Wisconsin voted to declare the Shirley Wind Project to be a human health hazard. The approved motion states:
>
> "To declare the Industrial Wind Turbines at Shirley Wind Project in the Town of Glenmore, Brown County, WI. A Human Health Hazard for all people (residents, workers, visitors, and sensitive passersby) who are exposed to Infrasound/Low Frequency Noise and other emissions potentially harmful to human health.""

While the State of Wisconsin controls siting of industrial wind, it cannot override or subjugate the "public health hazard" declaration and initiatives. A health hazard, in most jurisdictions, is a condition of high alert, where acute or chronic illness, or death, may occur due to prolonged exposure. The hazard must be reported, and in some areas, mandated abatement must take place.

Mayor Lonny Napper seems to be of the same mind, noting that the Green Energy and Green Economy Act has taken away much democratic decision-making: his council's bylaw aims to ensure people in his jurisdiction will be protected from turbine related ILFN and the effects that are recorded, sadly, worldwide.

Common effects are from chronic unrelenting noise, sleep disorders, hormone level disruption, increased risk of disease, diabetes, hypertension, depression, heart arrhythmias, and possibly even cancer. (Carmen Krogh and Dr Robert McMurtry recently published a case definition that accepts inner ear disruption, sleep disorders, hypertension, mood disorders,

nausea, tinnitus, as part of the presenting complaints combined with proximity to wind turbines.)

"When I took an oath to protect my community, I took it very seriously," continues Mayor Napper. "The information about what other communities are suffering, disruption, noise, degradation of precious landscapes, seriously divided communities, and to see that this possible devastation is in my full view, for my residents, something has to give."

Mayor Napper does not understand the delay for protective measures. "People are suffering in other projects. My community is slated for multiple developers and several proposed wind projects. The time for action, and protective measures, has been with us for some time now....we can't continue to bounce around the same arguments and with no noticeable gain in community health rights. The protection of health is first."

Lange, of the North American Platform Against Wind Power (NA-PAW) agrees. "We have for some time now sounded the alarm for what amounts to a turbine factory health pandemic: similar effects are reported in communities worldwide. These "factories" operate without the sanction of communities. They operate without fire controls, without any regard for environmental practices, and they certainly override what is now common knowledge about noise: audible, shadow flicker, vibration and Low Frequency and Infrasound, and related air pressure fluctuations, which in combination or separately, are known to extract "torture" on unwilling people/communities."

Both Mayor Napper and Mr. Pratt, CAO, agree that individual communities need to understand that they can use bylaw powers to protect health as required. "If Ontario communities are having so little jurisdiction to control development of massive electrical producing facilities within their boundaries, the least the council can do is to mediate the devastating health effects already reported and well known to exist, that many feel are sure to happen here." Mr. Pratt says that he hopes the bylaw will be an example to other councils. Pratt adds, "The Town of Plympton-Wyoming Council has worked hard to protect our residents, and make sure that

GLENMORE, WI

The Board of Health was asked to look at the study's raw data, the evidence linking the sound data to the wind turbines, peer-reviewed medical research and the complaints of the people living in the conditions around Duke's Shirley Wind project. They looked at the facts, they listened to the residents, they studied the medical literature, and then made the connection between Shirley Wind's operations and the suffering in Glenmore – declaring the wind turbines a "Human Health Hazard".

Over 50 affidavits to the Public Service Commission were received. Several families had to vacate their homes, and were not provided restitution by the State.

https://www.wind-watch.org/news/2014/10/16/duke-energys-shirley-wind-turbines-declared-a-human-health-hazard/

developers are required to deal with issues and appropriately respond to complaints and requirements from council."

Adds Lange, "The known effects of infrasound and low frequency noise may well turn out to be the death sentence for a non-performing, entirely subsidy driven, outrage."

Even the MOE (Ministry of Environment Ontario) admits in 2009 the complex nature of sounds and pressures:

"I went out last night for about 5 hours (got home midnight) and got some real firsthand experience with different types of noise that the turbines can create. The same turbine or groups of turbines could create 3-4 different types of noise and at different magnitudes at different times in the evening all depending on meteorological conditions, time of day, their orientation, and how they readjusted themselves (auto or by manual control – we don't know) to wind speed and direction. Also I was able to experience firsthand wind shear conditions (no wind at ground but turbines still generating creating noise) and how that plays an important role in noise impacts." —Oct. 29, 2009, Bill Bardswick, Director West Central Region, Ontario Ministry of Environment

ORDER TO STAND DOWN

"Ok, message received and understood. Cam [Cameron Hall] and I will stand down until directed otherwise." —Mar. 8, 2010, Gary Tomlinson, Provincial Officer, Senior Environmental Officer, Guelph District Office, West Central Region, Ontario Ministry of the Environment

For more information please contact:

Mayor Lonny Napper
Town of Plympton-Wyoming
546 Niagara Street, P.O. Box 250
Wyoming, Ontario N0N 1T0
Phone: 1 226 307 0523
Napper1@cogeco.on.ca

Kyle Pratt **MPA, CMM III, CHRP, CMO**
Chief Administrative Officer
Town of Plympton-Wyoming
546 Niagara Street, P.O. Box 250
Wyoming, Ontario N0N 1T0
Phone: 519-845-3939
Toll Free (Ontario): 1-877-313-3939
kpratt@plympton-wyoming.ca

Sherri Lange
CEO NA-PAW (North American Platform Against Wind Power)
kodaisl@rogers.com
416 567 5115

REFERENCES

http://stopthesethings.com/2014/10/13/world-first-ontario-council-includes-infrasound-in-wind-farm-noise-law/

http://www.obwf.ca/industrial-wind-turbines-declared-a-human-health-hazard/

http://waubrafoundation.org.au/resources/video-shirley-wind-project-wisconsin-usa/

http://waubrafoundation.org.au/resources/brown-county-ordinance-chapter-38-public-health-nuisance/

http://www.na-paw.org/pr-121207.php

http://waubrafoundation.org.au/resources/definitive-document-wind-turbine-noise-simple-statement-facts-august-2014/

http://waubrafoundation.org.au/resources/definitive-document-wind-turbine-noise-simple-statement-facts-august-2014/

http://www.thecrimson.com/article/2010/9/10/wind-energy-power-farms/

http://stopthesethings.com/2014/10/16/board-of-health-declares-wisconsin-wind-farm-a-human-health-hazard/

http://stopthesethings.com/2014/02/14/dr-mariana-alves-pereira-how-to-test-for-the-effects-of-low-frequency-turbine-noise/

file:///C:/Users/Home/Downloads/JRSM_Open-2014-McMurtry-.pdf

Open letter on wind turbine noise

Jean -Louis Butré *European Platform Against Wind Farms (EPAW)* *President* *3 rue des eaux Paris 75016 France* *contact@epaw.org* *http://www.epaw.org* *+33 6 80 99 38 08*	*Sarah Laurie WAUBRA FOUNDATION* *BMBS CEO PO* *Box 7112 Banyule VIC 3084 AUSTRALIA* *+61 474 050 463* *sarah@waubrafoundation.org.au* *www.waubrafoundation.org.au/*	*Sherri Lange* *North American Platform Against Wind Power (NA-PAW, USA-Canada)* *CEO* *416-567-5115* *kodaisl@rogers.com* *www.na-paw.org*

April 23 2015

English original letter

German translation

version française

Danish translation

Polish translation

Turkish translation

Slovenian translation

Open letter on wind turbine noise and action
in response to this letter

Dear decision-makers, politicians, Members of the EU Parliament, EU-Commission and other responsible public officials,

*1) 29th April, 2015 is the 20th anniversary of **International Noise Awareness Day**, so we would like to warn you about the dangers of wind turbine infrasound and low frequency noise (ILFN) which have been largely and intentionally ignored by the global wind industry, politicians and even health authorities. Worldwide the wind industry has been trying to force their wind turbines (WT) as close to people's homes as possible, for the sake of profit but at the expense of the health of the local residents, by deliberately ignoring the known sleep disturbance and serious health problems caused directly by impulsive wind turbine ILFN. Government authorities have been complicit in ignoring the existing scientific evidence, and the harm.*

2) We therefore request you do your own due diligence on this issue, and investigate for yourself. There is an abundance of acoustic,

scientific and clinical information independent of wind industry influence at websites such as ***epaw.org****;* ***na-paw.org****;* ***waubrafoundation.org.au*** *and scientific evidence found there, and books as Wind Turbine Syndrome by a medical doctor Dr. Nina Pierpont, MD PhD, 2009 (see also:* ***windturbinesyndrome.com****) and The Wind Farm Scam by a Reader in Ecology at the University of Wales Dr. John Etherington, 2009).*

3) The facts are that wind turbine noise: audible (low frequency noise LFN – under 200 Hz) and inaudible, but sensed very much (infrasound– under 20 Hz) results in serious adverse health effects, and is extremely dangerous to human health. Direct causation of symptoms and sensations from wind turbine generated impulsive infrasound and low frequency noise was established by US scientist Dr Neil Kelley in the 1980's. More recently Steven Cooper's work in Australia at Cape Bridgewater for wind developer Pacific Hydro has confirmed many aspects of Kelley's research thirty years earlier.

4) The lifetime span of wind-turbines is from 20 up to 25 years and there are another 25 years to be expected with new turbines at the same place, therefore there is no escape from them for people in their lifetime. People are mostly exposed to pulsating infrasound. These pulses arise as the wind turbine blades pass the pillar.

5) Therefore we firmly demand that you, as one of the decision-makers:

5.1. Start considering the scientific evidence on the dangers of wind turbine noise, which go back as far as 30 years (NASA study, others and a historical overview on the wind turbine noise). These studies have shown that especially infrasound penetrates through closed windows and walls, and even resonates and amplifies within rooms to cause even stronger effects (cdn.knightlab.com),

5.2. Stop ignoring so many people all over the world crying for help and even leaving their homes due to the wind turbine noise (for example: epaw.org; na-paw.org),

5.3. Recognize that wind farms are one of the worst night time noise pollutants of today and that prolonged sleep deprivation is also considered to be a method of torture by the "The UN Committee against Torture (CAT),

5.4. ***Recognize what the wind industry does not want the general public and responsible public officials to learn, that there is much evidence on infra- and LFN wind turbine noise including the facts that****:*

- More megawatts produced by more powerful wind turbines means a greater proportion of infrasound and low frequency noise is generated,

- Infrasound is known to travel very, very long distances,

- Noise-pollution by wind power developments with many wind turbines is much, much stronger than one with only wind turbine, although serious health damage can occur from just one wind turbine if it is too close to homes and workplaces,

- Infrasound from wind turbines on hills will travel greater distances,

- Stronger winds, higher air moisture, lower background noise in rural areas, temperature inversion, etc., can mean greater adverse impacts from relatively higher levels of infra- and LFN noise pollution,

- No current models exist which accurately predict real wind farm infrasound and low frequency noise pollution,

- Children, older people, pregnant women are especially sensitive and threatened,

- Safe setback distances for different sized wind turbines in different terrain have NOT yet been established and demonstrated to protect the surrounding population.

- Change the current noise measurements to full spectrum measurement inside homes and recognize that A-Weighted Sound Level (dBA) is inappropriate and unsafe because it does not include low-frequency noise and infrasound,

- Stop the use of dBA for wind turbine noise assessments immediately,

- Stop the wind power subsidies immediately.

We look forward to hearing from you soon. Thank you in advance.

Confessions of a Wind Tech

"These disturbing images haunt you night and day because you love these eagles. Some you find are headless and it always bothers you if you can never find the head. Others are cut in half and missing parts as well. Some you see are severely wounded, running around on the ground without a wing so that have to be caught so they can be put down or euthanized. Others have injuries you can't even see.

One eagle in particular, with its last bit of energy, sank its talons deep into a piece of wood and you had trouble pulling the massive talons away. You think to yourself this poor guy fought to the very end. You look ahead with dread because there will always be a next eagle that you will have to deal with. There is also guilt because you are aware that these turbines are killers and when you tell people what you do, you think to yourself they might be aware that you work for the "eagle killers". There is also guilt because we are supposed to report all the carcasses but if we "report" too many you will lose our job.

You no longer see the greater good in wind energy and hate the job you were once so proud of because your job, your career, and your company are slaughtering off these eagles. *There is no pride left in what you do, just shame."*

The Wind Tech

A real story of deception, fraud, and alternatively, courage! Told by a wind tech to wildlife and wind turbine specialist, Jim Wiegand. As readers will soon discover, not everyone is cut out to be a wind tech.

By Jim Wiegand

"I am an employee at a wind farm. I would like to speak with somebody about eagle deaths that I have seen and reported. Please give me a call back." It was forwarded to me and a meeting was arranged.

Imagine being a young man having served your time in the military and ready to settle into a career. You have a job but want something bigger and better, especially since marriage plans are in your future. You also have integrity so you want a meaningful life that can help make a difference in this world.

After months of researching career opportunities, a future in green energy gets your attention. After all renewable energy benefits society and green energy will help create a better world for your children to inherit. You discover that wind energy fits the bill and seems to have the most job opportunities.

So with your GI benefits, you enroll in an associate's degree program to be a certified wind turbine technician. After two years and excellent grades you feel a great deal of accomplishment when you graduate. You are now officially a wind turbine technician and it is time to make your mark on the world.

With your degree and the having the skills of being fearless, physically fit and knack for fixing things, you soon land a job.

In the beginning you were told that some birds would die but you were reminded that it wasn't that many, especially when compared to so many of the other things that kill birds. Besides the industry's new turbines are rotate much slower and are much safer for birds. You were also told that this was an industry that served the greater good of your community and the world.

As years roll by you are promoted and given new responsibilities. One of them is to deal with the carcasses from around the turbines. While you were clearly told from the top that you are supposed to report them, you were also reminded from others in the company that once out in the field, you are alone. No one is really aware of what you see or do. Most of all, reporting everything will likely lead to wind farm shut downs.

With your new responsibilities of handling the carcasses, you realize that the carcasses numbers are starting to add up. You are also seeing carcasses of beautiful strange birds that you had never seen before or even knew existed. So you start doing research to find out more about them. You discover the many of the birds you are finding are rare and are highly protected by strict laws.

You do additional research on wind turbines and start learning about their long history of killing birds. Your perception of wind energy is changing because of what you have learned and have experienced in the field. Turbines are sprouting up everywhere and you realize that the eagles and other species you thought were so protected are not.

There is great sadness from finding these carcasses, and especially the dead eagles. It

pierces your soul and the images of the dead eagles you have found, won't leave your brain.

These disturbing images haunt you night and day because you love these eagles. Some you find are headless and it always bothers you if you can never find the head. Others are cut in half and missing parts as well. Some you see are severely wounded, running around on the ground without a wing so that have to be caught so they can be put down or euthanized. Others have injuries you can't even see.

One eagle in particular, with its last bit of energy, sank its talons deep into a piece of wood and you had trouble pulling the massive talons away. You think to yourself this poor guy fought to the very end. You look ahead with dread because there will always be a next eagle that you will have to deal with.

There is also guilt because you are aware that these turbines are killers and when you tell people what you do, you think to yourself they might be aware that you work for the "eagle killers". There is also guilt because we are supposed to report all the carcasses but if we "report" too many you will lose our job.

You no longer see the greater good in wind energy and hate the job you were once so proud of because your job, your career, and your company are slaughtering off these eagles. There is no pride left in what you do, just shame.

Your participation in these eagle deaths isn't what you signed up for and you feel trapped. The wonderful career that you once thought could make a difference is helping to kill a piece of the world. You no longer sleep soundly as you once did.

Now you must carry this burden. A burden that stays with you even on your days off because you know have to go back. A job that helps to keep the turbines running, and the better the turbines run, the more eagles that are going to die. Topping off your dilemma is the thought of a globetrotting boss that drives around in a Ferrari.

Then you read a quote made by wildlife biologist Doug Bell in 2015 that really hits home..... "It's one of the most painful things to come across, an injured or dying eagle," Bell says. "It's just such a meaningful symbol."

This quote is a tipping point for you because you know better than anyone the tragedy taking place around these turbines. Then after much soul searching over the next several months, you make a decision to do something. You reach out for help and contact Save the Eagles International. An international organization founded by a Mark Duchamp, a man who once worked for a wind farm in Spain that also slaughtered eagles. He has now dedicated his life to saving eagles from the industry he once worked for.

Surely he would understand what you have been dealing with.

In September 2015 Save the Eagles International received an email correspondence from

this wind tech..... "I am an employee at a wind farm. I would like to speak with somebody about eagle deaths that I have seen and reported. Please give me a call back." It was forwarded to me and a meeting was arranged.

The Meeting

At the meeting this sad story unfolded about a man trapped by his conscience, his family obligations, and an unknown future.

The meeting lasted for about 1 1/2 hours which was more like an Act of Contrition with me being the priest. He said he was a Christian but had a belief system towards eagles similar to the Native American people, a belief that all eagles have a special spiritual connection with the Great Creator and which were specifically chosen to be the masters of the sky. He also believed that eagles also deserve the highest respect because in this world they represent truth, strength, courage, wisdom, power, and freedom.

But as he has found out, wind energy and these turbines show eagles no respect.

I explained to him some of the things I knew about this industry. When I told him about the how the slower rotating blades fool these eagles into thinking they can fly through these openings in the blades, to my surprise he said he knew all about it and even added: "When they see prey across a hillside they just go for it and don't even think about the blades because they want that food." He also said: "They tell you these big turbines are safer but I know the tip speeds are faster and it is not true."

He was curious and wanted to know why I did not work for the California DFG or the USFWS. I told him because "I will not lie about these eagles and other species on behalf of corporate interests. When you work for these agencies this is what you have to do. I figured this out right out of college."

While he was talking I was shown dozens of eagle carcass images. I commented about how many of these images he had and that the industry does their best to keep them away from the public. He then added that the wind company had thousands of similar images.

Thousands of these images from one wind farm?

This really got my attention. So did an incredible number of eagle carcasses he told me were found in one terrible month. The numbers of eagles he told me about far exceeded the monthly total reported from every one of wind farms at Altamont Pass Resource

Area. I happen to be aware of these reported numbers because the USFWS gave them to me up through August 2015.

Enlisting help from the USFWS

I know retired a USFWS agent named Sam Jolla. I trust him and respect his opinion so I contacted him about this meeting. I told him about the high number of eagle carcasses. He insisted that if true, it was not only criminal but there needed to be an investigation. So Sam put me in contact with a very good agent he said could be trusted.

Sam also warned me: Every time a writer, journalist, reporter, etc., contacts ANY USFWS agent about a wildlife investigative issue, ***that agent has to immediately seek approval after the bureaucrats in D.C. get the details and the nature of the query.***

I made contact this agent without giving any specific details. I insisted that if there were to be an investigation that this person would have to be granted full immunity because this would likely ruin his life. I also required that a single question be answered that would prove to me the USFWS would not deliberately conduct a bogus investigation.

I wanted to know the highest total of eagle carcasses reported by a single US wind farm company over the last two years. I figured the wind Tech's number eagle carcass would easily be much higher so there would be a case. But if the question could not be answered, then there is no case anyway because the data in USFWS books is being concealed by the Interior Department would not be used as evidence anyway

Apparently all this did not **meet the approval** of Interior Department superiors because it has now been over 6 weeks and I was told they would not answer that question.

At this point the question means nothing anyway because with no promise of immunity, there could still be no investigation. This guarantee is vital for full cooperation and to keep evidence from disappearing.

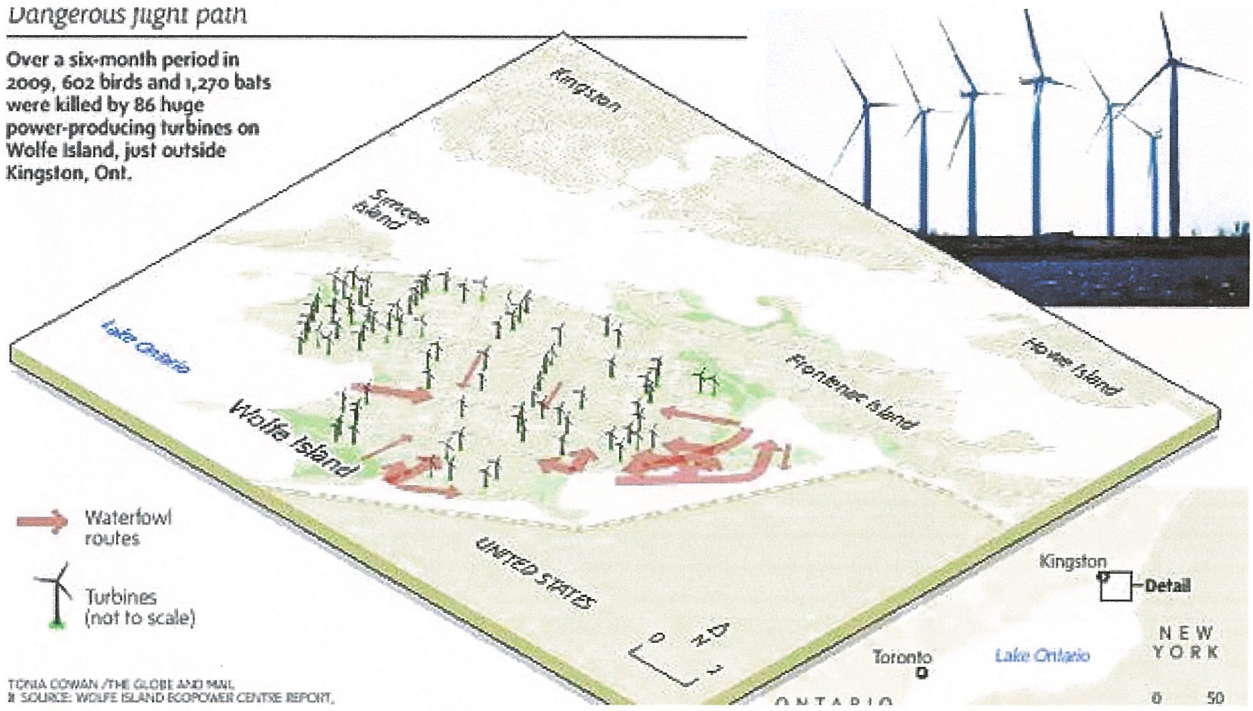
Without immunity this wind tech could also be held accountable for breaking company gag orders and be prosecuted for the wind industry's seldom enforced

carcasses reporting laws. But if granted full immunity from prosecution, this would encourage others I was told about, with similar stories, to come forward.

I did not take the images but I do hope they will one day be used as evidence in a legitimate investigation into a wind industry's culture of hiding carcasses.

I very much appreciate the courage it took for this wind tech came forward. I was already aware that this culture existed within the industry, but what I did not realize was the potential numbers of carcasses that have been hidden and the burden this activity places on some employees.

Since 1997 over 31,000 unaccounted for eagle carcasses have been shipped to the Interior Department's Denver Eagle Repository. How many more eagles killed by wind turbines were never shipped?



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Based on carcass locations reported, searchers only examined a total area equivalent to about 1/6 of a 50-meter search radius around each turbine (1/6 of 7,854 square meters or 0.33 acres) – when they should have searched a 200-meter-radius area (31 acres), an area 94 times larger.

Again, mortalities officially recorded in the industry's two 2011 six-month reports totaled 442 birds, 24 raptors, and 533 bats. In reality, taking into account the various methods used to minimize carcass

counts, the Wolfe Island turbines are actually slaughtering 644 raptors, 21,512 other birds, and 29,831 bats!

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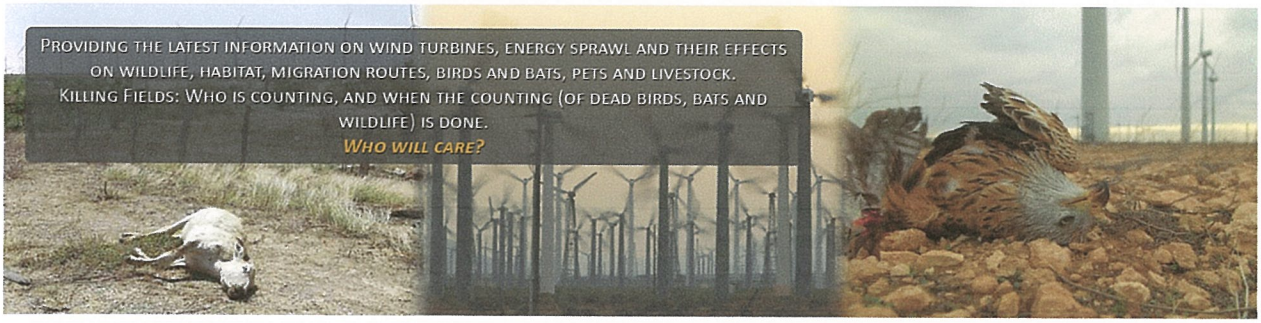
The fraudulent mortality information coming out of Wolfe Island is not an aberration. It is deliberate. It is the norm for the wind industry.

It does not matter whether the wind farm is located in Canada or the United States. The reported data are fraudulent. Every single mortality study has been deliberately and systematically contaminated with serious research and methodology flaws – which are then "blessed" and accepted as accurate, to advance pro-wind, anti-hydrocarbon agendas and policies.

In my expert opinion, the 86 Wolf Island turbines are killing over 50,000 birds and bats a year, including many vitally important species. This is more than 250 fatalities per MW, and more than 500 per turbine.

http://www.windturbinewildlifehell.org/site/hiding-avian-mortality-where-green-is-red-part-ii-wolfe-island/



Hiding Avian Mortality: Where 'Green' is Red (Part II: Wolfe Island)

By Jim Wiegand -- September 13, 2013

> *"It is time for responsible people who care about our environment and wildlife to step forward – and demand investigations; prosecutions for fraud, dereliction of duty, and receipt of taxpayer subsidies and other payments made in reliance on false and misleading reports; a suspension of all payments to wind turbine companies, government officials and environmental groups involved in the deception; termination of permits for wind turbines in or near bird and bat habitats; and enforcement of endangered species and migratory bird laws fully and equally against all industries, including industrial wind power."*

While Altamont Pass operators have been hiding most of their wind turbine mortality with search intervals of 30–90 days (see Part I (http://www.masterresource.org/2013/09/hiding-avian-mortality-altamont-pass/)), the rest of North American wind farms hide mortality by using search areas that are far too small. By using only 50 meter search areas for their huge new turbines, the wind facility operators can easily hide over 90% of fatalities caused from turbine blade strikes.

The motive is obvious. The more avian bloodshed, the more public outcry. The more outcry, the less money for wind industry players. The more they hide the ecological devastation, the more they mute the outcry and maintain the flow of subsidies for wind power.

The horrendous impacts on bird and bat populations across North America are of little concern to these special interests.

Wind Turbine Mortality Facts

Studies I have examined make it clear that the wind industry has known for more than ten years that the average distance a carcass travels from a wind turbine is about two and a half to three times the length of the wind turbine blades. The industry has also known for years that about 85% of fatalities can be found within a

50-meter search radius around **small** 100-kW turbines with blades a mere 8-9 meters long. These facts are well documented in the 1998-2003 studies at Altamont Pass based on the locations of hundreds of bird fatalities.

In 2009, the industry reported another similar and supporting statistic. An Altamont study concluded that 95% of all fatalities from these same **small** turbines could be found within **125 meters** from turbine towers. The average size of the approximately 2,500 turbines in the study was 107 kW. The remaining 5% of fatalities is attributed to birds that fly or wander off mortally wounded, after being hit by turbine blades.

Today, the industry's huge turbines are 25-45 times larger than the thousands of turbines studied at Altamont, in terms of electricity output and area swept by their much longer blades. The big blades are over 50 meters long, and their tip speeds are 25-33% faster, than for the small turbines. These higher tip speeds propel bodies and severed parts much further from turbines.

Using these data and adjusting for the vast difference in turbine and blade size, some 95% of the turbine mortality can be expected to be found within **400 meters** of a 2.3-MW.

A three-year study at Altamont confirms this. (See Figure 1.) The study was conducted around 38 1-MW wind turbines with a 75-meter search radius. Carcass location was documented, and 71% of the fatalities found by searchers were **beyond** the 29-meter length of the turbine blades. The **fewest** fatalities were found **under** the blades and **around** the turbine towers.

This clearly demonstrates that even the 75-meter search limit employed in this study was undersized for this turbine. Had the search perimeter been set properly, far more fatalities would have been found and well over 90% of them would have been located beyond the length of the blades. The grossly inadequate search area, however, helps ensure that official bird (and bat) mortalities are kept artificially (and fraudulently) low – and the public is kept in the dark about the true impact of these supposedly "environment friendly" wind turbines.

The study also used Altamont's absurd 30-day search intervals, which ensures that most of the carcasses are taken away by scavengers, and thus "disappear" before searchers have a chance to find them. This clever tactic drives the fatality counts even lower.

Nevertheless, the study has been presented as one of the wind industry's primary justifications for asserting that its new turbines are safer for bird and bats.

Making the claims even more ridiculous and misleading, the industry's newest turbines are much larger, much taller, with much faster tip speeds than even the 1-MW variety. The new 2.3-MW turbines are 130 meters (426 feet) tall and have 50-meter (164-foot) blades – meaning the total distance swept by the spinning blades is 108 meters (354 feet) – or 54 meters (127 feet) in each direction from the center of the turbine tower and rotor.

And yet, the industry is still employing a 50-meter search perimeter for these huge turbines. That doesn't even cover the distance overshadowed by the blades, much less the areas into which butchered birds and bats are likely to be catapulted by the enormous force of monstrous blades that are moving at 200 miles per hour.

Using the industry's approximation that 80-85% of fatalities are found within 50 meters of **small** 100-kW wind turbines, I created a graphic that compares carcass distributions in equal proportion to the industry's large turbines. (See Figure 2.) For a turbine 130 meters tall with 50-meter blades, 85% of the fatalities can be expected to fall within **183 meters (600 feet)** of the turbine tower!

This is far beyond the 50-meter search area employed by the wind industry – with the approval and connivance of the U.S. Fish and Wildlife Service, bird protection and environmental groups, the California Fish and Game Commission, and their counterparts in Canada and elsewhere.

Moreover, this preliminary analysis does not account for the increased blade tip speeds on 2.3-MW turbines, compared to 100-kW or even 1-MW turbines. Adjusting for blade tip speeds, one can expect that 85% of the bird carcasses and body parts will actually be found **200 meters (655 feet)** or more from the center of turbine towers.

All these facts have been studiously and deliberately ignored by the wind industry. It continues to use its "approved" 50-meter search radius as the standard. In fact, this is the area where the **fewest** fatalities are likely to be found: under the blades and in the gravel area immediately around the turbine towers. It likely eliminates at least 90% of carcasses that are being launched by turbine blades and dropped well outside of their tiny search areas.

The Wolfe Island Studies

In early 2011, the company that owns and operates the 86 wind turbines on Wolfe Island released its first mortality study. After making "adjustments," the study estimated that the turbines killed 602 birds and 1,270 bats between July 1 and December 31, 2009; an additional 549 birds and 450 bats were killed between January 1 and June 30, 2010. The total fatality toll for the twelve months was estimated to be 1,141 birds, 24 raptors, and 1,720 bats.

The huge number of fatalities generated extensive negative publicity around the world, and the Wolfe Island wind installation quickly became known as Canada's deadliest energy facility. In response to this criticism' and under the direction of the country's Ministry of Natural Resources, new "management" procedures were adopted that would supposedly reduce these turbine impacts. Follow-up studies "indicated" that the new procedures for were having a positive impact and Wolfe Island wind turbine mortality was being reduced.

In reality, the "management" procedures had little or nothing to do with actually reducing bird and bat deaths – and everything to do with reducing official death tolls and bad publicity. The supposed reduction in mortality is easily and more accurately explained by the fact that Wolfe Island "researchers" are now spending less time in the field and looking at smaller search areas.

There are so many problems with the Wolfe Island studies that they cannot possibly be addressed in one article. However, it is clear from the study data and information that most of the mortality from the 86 turbines is simply not being reported.

My research also revealed that the guidelines and bogus monitoring protocols for Wolfe Island were apparently put together under the direction of the Canadian Renewable Energy Corporation ("CREC"), Environment Canada's Canadian Wildlife Service ("EC"), Natural Resources Canada ("NRCan"), Ontario Ministry of Natural Resources ("MNR") and Ducks Unlimited Canada ("DUC"). A similar pattern is apparent with government agencies and conservation groups in the United States.

One can hardly avoid the conclusions that these organizations are deliberately obfuscating and hiding the bird and bat butchery to advance a "green" agenda. They have decided that oil, gas and coal are environmentally damaging – whereas wind power is "eco-friendly" – and the facts will not be allowed to get in the way. Far too much money, power and prestige are at stake. Aggressive environmentalists have taken over the government agencies and conservation groups, and forged partnerships with the wind industry and its political supporters. They are determined that the Canadian and American publics will not learn the truth about avian fatalities.

The anti-hydrocarbon agenda, in short, trumps wildlife protection. It also breeches the standards and ethics this country is based upon.

Among the bogus "management" strategies included in the new Wolfe Island "monitoring" plan were that search areas would be limited to 50 meters (shorter than each turbine's blade length) and 85% of fatalities would be assumed to be located within 50 meters. These strategies are clearly fraudulent, because (as explained above) the search areas for these 2.3-MW turbines should have been at least 200 meters. And yet, all these groups signed off on the new schemes.

The so called Wolfe Island "monitoring plan" also allowed workers searching for fatalities to **avoid searching** the entire 50-meter areas, as long as they "factored in" the percentage of the area that had actually been searched. The plan also allowed monitoring teams to block out certain areas from within the 50-meter search radius and exclude any carcasses that were found outside the remaining search areas.

These monitoring protocols for Wolfe Island effectively ensure that mortality searches around turbines are now conducted primarily on the gravel areas around the turbines and **away from** the primary direction of carcass throw. (See Figure 3.) In other words, the protocols are specifically designed to focus on the areas that are **least likely** to have bird and bat carcasses and body parts. These areas are also the easiest areas for wind personnel to pre scan for bodies ahead of searches.

An examination of the studies makes it abundantly clear the mortality analyses are replete with patterns of carcass dispersal that are not only non-random, but impossible. I ran some calculations for these carcass dispersal patterns, to determine the likelihood of these events taking place. I got probability numbers in the quintillions! (See Figure 4).

It is clear that researchers were only looking in only small sections of deliberately too-small 50-meters radius search areas. Equally disturbing, search teams, wind industry personnel, lease holders, and farmers tilling the soil around turbines would not mention the obvious presence of carcasses cast about by the turbines.

Eyewitness: Massive Geese Slaughter

Here is an on-the-spot report that was posted (http://ontario-wind-resistance.org/2011/12/07/witness-observes-wolfe-island-turbine-canada-geese-slaughter/) in December 2011:

> *On Friday morning, September 30 at 9:30 am, it was surprising to personally witness the destruction of a flight of Canadian Geese by one of the Wolfe Island turbines. Here is what happened; from a clear view second floor window at our home on Tibbetts Point Rd. I watched geese lift off and form up along the shore of Wolfe Island. At about a hundred feet of altitude they wheeled into the wind, headed in a west/southwesterly direction. As their climb into a headwind slowly took them over Wolfe the wind speed gauge at our house continued to read a strong and steady 22-25 mph. It was overcast. The river was rolling.*
>
> *Crossing Wolfe, they flew into the plane of spinning turbine blades. This one turbine is directly across from our home and close to us at about a mile and a half. Through 8X binoculars the carnage was mesmerizing.*
>
> *Imagine a scene of blade impacts repeatedly knocking dark puffs of feathers against a grey sky. With such a strong wind, limp bodies seemed to be blown backwards out of the turbine. Amazingly the rear of the flight followed into the blades. They seemed oblivious to the destruction of their leaders. With strong headwinds slowing their passage the period of danger and destruction was prolonged. After about two-thirds entered this gauntlet, the flight finally broke off, lost its V shape and scattered.*

This eye witness account does not match any of the Wolfe Island mortality studies. Swans, geese, and ducks by the thousands use the habitat around the Wolfe island turbines. These species are routinely observed foraging in the fields around the turbines – and yet the death of geese and other waterfowl are mysteriously missing from official studies.

This underscores yet another aspect of these studies: the species fatality lists are **bogus**.

The only waterfowl found reported killed by the turbines were a few mallards over a three-year period. The reports show no geese or swans – and no owls, eagles, falcons or many other highly sensitive species that use the Wolfe Island habitat. Yet, wind turbines are known to **kill every flying species** that share the same habitat. The official counts are simply impossible, especially when mortality estimates explode into the thousands after being properly adjusted.

Rigged Data with Proper Adjustments

When properly adjusted, the numbers coming out of Wolfe Island are staggering. As I have pointed out, the studies used undersized search areas. When corrected for 200 meters (0.0625 factor – meaning the original study ignored 94% of the area that should have been searched) and searcher efficiency of 0.5 (50% of carcasses actually found), the July-December 2009 estimated mortality of 602 birds can be corrected to **12,505 birds**.

When the searcher efficiency for bats is adjusted with a far more accurate 0.4 (40% of carcasses found) rating instead of a 0.630 rating, the estimated bat mortality skyrockets from 1,270 to **31,973 bats in just six months.**

Along with the undersized search areas, in the all studies researchers improperly gave themselves elevated adjustment factors that allowed them to calculate fewer mortalities. The searcher efficiency rating of 1.0 for raptors is patently ridiculous, because it means they were claiming that they were not missing **any** raptor carcasses. A 0.7 rating is far more likely, because the terrain around the turbines is far from being just gravel and many of the raptor species are small.

With a 0.7 (70%) searcher efficiency rating, and considering that only 85% of dead raptors will be found in even a 200-meter search area, mortality should be considered to be, not merely 23 (as claimed) – but around **541 raptors** for the twelve-month period, July 2009 through June 2010, for the 86-turbine Wolfe Island installation.

The industry researchers "adjusted" all their Wolf Island studies, using searcher efficiency ratings that are not possible with the mixed habitat surrounding the turbines.

For example, Figure 4 shows the native vegetation surrounding the turbines. In this habitat the searcher efficiency rating for small birds and bats could not be any better than 0.2 (that is, they miss 80%), unless several people spent hours at each turbine with each visit – which never happens. In fact, searchers only spent a few minutes around each turbine with each visit, making their self-proclaimed searcher efficiency ratings completely false and unreliable. Nevertheless, in the studies, they used a factor of 0.8, as if they only missed 20% of the carcasses.

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In my expert opinion, the 86 Wolf Island turbines are killing over 50,000 birds and bats a year, including many vitally important species. This is more than 250 fatalities per MW, and more than 500 per turbine.

Properly designed and executed studies would show similar numbers – with far more species showing up on the mortality lists, beyond the few listed in the official reports.

This wind industry problem of hiding the slaughter has gone on for years. Worse, it is being aided, abetted and shielded by the very government agencies that have been established and empowered to protect our wildlife – and by mainstream conservation groups that have abandoned their charters and embraced wind industry projects, and wind industry payments.

Ironically, groups like the Audubon Society and Sierra Club not only collect money from members who donate to save our wildlife – they also collect money from an industry whose projects are slaughtering our wildlife. In the meantime, millions upon millions of protected birds and bats, among hundreds of species, are being killed every year by wind turbines.

The participants in this universal fraud can never be expected to come clean, and accountability under the current corrupt system will be very elusive. But thanks to the internet, the information in this article will not be censored by mainstream media. It will resonate across the world.

It is time for responsible people who care about our environment and wildlife to step forward – and demand investigations; prosecutions for fraud, dereliction of duty, and receipt of taxpayer subsidies and other payments made in reliance on false and misleading reports; a suspension of all payments to wind turbine companies, government officials and environmental groups involved in the deception; termination of permits for wind turbines in or near bird and bat habitats; and enforcement of endangered species and migratory bird laws fully and equally against all industries, including industrial wind power.

Jim Wiegand is an independent wildlife expert with decades of field observations and analytical work. He is vice president of the US region of Save the Eagles International, an organization devoted to researching, protecting and preserving avian species threatened by human encroachment, and development.

References

Insignia Environmental, Final Report for the Buena Vista Avian and Bat Monitoring Project, February 2008 to January 2011. April 2012. Prepared for Contra Costa County. Martinez, CA. This report is not available on the internet.

Environment Canada Comments on the Wolfe Island Wind Plant Post Construction Monitoring Report No. 6 (http://www.transalta.com/sites/default/files/Environment%20Canada%20-Comments%20on%20Wolfe%20Island%20Post%20Construction%20Monitoring%20Report%20July%2012%202012.pdf) July– December 2011 (dated March 2012).

Wolfe Island Wind Plant Post-Construction Follow-Up Plan, Bird And Bat Resources Monitoring Report No. 6 (http://www.transalta.com/sites/default/files/Wolfe%20Island%20Bird%20and%20Bat%20Monitoring%20Report%206%2 %20July%202012.pdf), July-December 2011.

Wolfe Island Wind Plant Post-Construction Follow-Up Plan, Bird And Bat Resources Monitoring Report No. 5 (http://www.transalta.com/sites/default/files/PCFP_Report5_Dec2011.pdf), January-June 20 11.

Wolfe Island Wind Plant Post-Construction Follow-Up Plan, Bird And Bat Resources Monitoring Report No. 4 (http://www.transalta.com/sites/default/files/WI-PCM-Report-4_final_July2011.pdf), July-December 2010.

Wolfe Island Wind Plant Post-Construction Follow-Up Plan, Bird And Bat Resources Monitoring Report No. 3 (http://www.transalta.com/sites/default/files/Post-ConstructionMonitoringReport_2011-01-24_.pdf), January-June 2010.

Wolfe Island Ecopower®Centre Post-Construction Follow-Up Plan, Bird And Bat Resources Monitoring Report No. 2 (http://www.transalta.com/sites/default/files/Wolfe-Island-EcoPower-Centre-Post-Construction-Monitoring-Report-July-December-2009.pdf), July-December 2009.

Wolfe Island Ecopower®Centre Post-Construction Follow-Up Plan, Bird And Bat Resources Monitoring Report No. 1 (http://www.transalta.com/sites/default/files/Wolfe-Island-EcoPower-Centre-Bird-and-Bat-monitoring%20report-2009-06.pdf), May – June 2009.

ICF Jones & Stokes, Draft Altamont Pass Wind Resource Area 48-Hour Search Interval Bird Fatality Study (http://www.altamontsrc.org/alt_doc/m32_apwra_draft_48_hour_search_interval_kb_study.pdf), June 2009. M32. (ICF J&S 00904.08) Sacramento, CA. Prepared for: Altamont County Community Development Agency, Hayward, CA.

Altamont Pass Wind Resource Area Bird Fatality Study, Bird Years 2005–2009 (http://www.altamontsrc.org/alt_doc/m21_2009_altamont_bird_fatality_report.pdf). Prepared for Alameda County Community Development Agency.

Smallwood, K. S., and C. G. Thelander, Developing Methods to Reduce Bird Fatalities in the Altamont Wind Resource Area, Final Report (http://altamontsrc.org/alt_doc/cec_final_report_08_11_04.pdf)by BioResource Consultants to the California Energy Commission, Public Interest Energy Research – Environmental Area, Contract No. 500-01-019 (L. Spiegel, Project Manager), 2004.

Insignia Environmental, 2008/2009_Annual Report for the Buena Vista Avian and Bat Monitoring Project (http://www.altamontsrc.org/alt_rl.php), September 4, 2009. Prepared for Contra Costa County, Martinez, CA.

17 Comments

Ronald Walter () • September 14, 2013 at 9:04 am

A study to determine the avian mortality rate due to wind turbine causes would require a 1000 meter radius from the base of the tower.

All you have to do is look for dead birds and document the cause of death. Not a difficult job to do. It is easy to do the math and lie about the figures. Liars figure and figures lie. Especially for high counts of birds dying because of wind turbines.

The North American continent has a bird population of 20 billion and higher. 'Collateral damage' fits into the equation and the high level of tolerance is accepted as the norm. In essence, rock smashes scissors, paper covers rock, scissors cuts paper, turbine kills bird.

Dodo birds and passenger pigeons didn't have a chance either.

A new game is out there and birds don't count.

Reply (/cuisinarts-of-the-air/hiding-avian-mortality-ii-wolfe-island/?replytocom=21351#respond)

Shellie Correia (http://mothersagainstwindturbines) • September 14, 2013 at 10:48 pm

Accurate counts of bird and bat deaths would be simple enough. A 24 hr. surveillance camera with a zoom lens, and infrared for dark, would be able to capture each and every kill that occurred. But the industry does not want the truth to be out there. Any home or building near a turbine would make an ideal place to set up the camera. Every community that has been infested with turbines could do this.

Reply (/cuisinarts-of-the-air/hiding-avian-mortality-ii-wolfe-island/?replytocom=21352#respond)

jwiegand () • September 15, 2013 at 11:10 am

Using camera surveillance for accurate counts of bird and bat deaths would be very simple. It would also save millions wasted on the industry's bogus studies and their contrived calculations.

Camera Surveillance was first suggested in a 1988-1991 study conducted at Altamont by Orloff and Flannerly. I believe the researchers were sincere and that they had no idea that this suggestion was actually the wind industry's worst nightmare. After all images of raptors being slaughtered and the magnitude of the carnage would have rightly killed this corrupt industry decades ago.

Surveillance cameras would also stop the wind personnel from picking up bodies and culling through them looking for endangered species

Reply (/cuisinarts-of-the-air/hiding-avian-mortality-ii-wolfe-island/?replytocom=21353#respond)

Shellie Correia (http://mothersagainstwindturbines) • September 15, 2013 at 3:51 pm
(https://www.masterresource.org/carbon-tax/carbon-tax-implausible-impossible/#comments)

Thanks for the vote of confidence Jim….I am going to run with this!

Reply (/cuisinarts-of-the-air/hiding-avian-mortality-ii-wolfe-island/?replytocom=21354#respond)

Hiding Avian Mortality: Where 'Green' is Red (Part II: Wolfe Island) | Wind Turbine Wildlife Hell (http://windturbinewildlifehell.org/site/hiding-avian-mortality-where-green-is-red-part-ii-wolfe-island/) • September 18, 2013 at 6:05 pm

[…] Original article: http://www.masterresource.org/2013/09/hiding-avian-mortality-ii-wolfe-island/#more-27568 (http://www.masterresource.org/2013/09/hiding-avian-mortality-ii-wolfe-island/#more-27568) […]
Reply (/cuisinarts-of-the-air/hiding-avian-mortality-ii-wolfe-island/?replytocom=21355#respond)

jwiegand () • September 20, 2013 at 12:13 pm
When people support the wind industry they support an industry built on fraud, the slaughter of protected species, and hiding these terrible impacts. The Wolfe Island studies were rigged and hid somewhere close to 98% of the mortality from their turbines.

A recent AP story about eagles killed by turbines has a similar ring to it because the eagle kills from turbines were grossly understated in the Raptor Research article by at least 90%. They reason is because they never come close to finding them all, the industry hides bodies, and even if they do find them, the mortality wounded that wander far away from the industry's tiny search areas do not count in their studies.

The bald eagle killed by a wind turbine seen in the photograph at the link below is over well over 400 meters yards from the turbines and this disgusting industry does not count these bodies in their mortality studies because it is outside their tiny designated search areas. This is typical of the wind industry's fraud that has been going on since the early 1980's.

PHOTO OF BALD EAGLE KILLED BY A WIND TURBINE CAN BE SEEN ON YAHOO NEWS study-wind-farms-killed-67-eagles-5-years-160226373.
Reply (/cuisinarts-of-the-air/hiding-avian-mortality-ii-wolfe-island/?replytocom=21356#respond)

Shellie Correia (http://mothersagainstwindturbines) • September 20, 2013 at 4:44 pm
I couldn't agree with you more….that is exactly why we have to step up and do the monitoring ourselves! It is well worth the effort, to save our feathered friends.
Reply (/cuisinarts-of-the-air/hiding-avian-mortality-ii-wolfe-island/?replytocom=21357#respond)

Tim B in Australia () • October 2, 2013 at 7:43 am
Hi, I lived in Kingston 1970-4 and visit the place on Google earth. This might sound really ignorant of some of the issues, but had the wind farm originally been put in the lake and not Wolfe Island (where I used to explore and pick apples as a kid) would this have solved or much reduced the kill? We've all seen how the clever Swedes (or was it the Danes?) put them in the sea. You guys need to get this on a Canadian national "60 Minutes-style" program so that it is widely and definitively exposed.
Reply (/cuisinarts-of-the-air/hiding-avian-mortality-ii-wolfe-island/?replytocom=21358#respond)

Shellie Correia (http://mothersagainstwindturbines) • October 2, 2013 at 3:50 pm
Our government does not want turbines in the water, and has put a moratorium on off-shore wind. There are too many Liberals with water-front properties. They want the money, and do not care who they hurt. On-shore turbines are destroying our rural communities, and our environment.
Reply (/cuisinarts-of-the-air/hiding-avian-mortality-ii-wolfe-island/?replytocom=21359#respond)

Tim B in Australia () • October 3, 2013 at 10:50 pm
This is very disheartening and somewhat reminiscent of our other great shame in the world, the seal pup hunt. I would like to know the Canadian government's stated rationale for the moratorium on offshore turbines, but it always just seems like the easiest option wins until their hand is forced by opinion and outrage. Wolfe Island is obviously a major

key in the migration path since it represents the birds' safest crossover point at the eastern end of Lake Ontario and you can't tell the birds to go around please.

Reply (/cuisinarts-of-the-air/hiding-avian-mortality-ii-wolfe-island/?replytocom=21360#respond)

Shellie Correia (http://mothersagainstwindturbines) • October 4, 2013 at 8:41 am

I am still pushing private citizens to set up 24 hr surveillance video cameras with infrared, and a zoom lens, so that the public can know the truth about the devastation that is being caused. The wind industry lies through their teeth about everything they do.

Reply (/cuisinarts-of-the-air/hiding-avian-mortality-ii-wolfe-island/?replytocom=21361#respond)

Jim Wiegand () • October 4, 2013 at 10:18 am

Shellie Correia I wish you Good luck with your efforts. Remember one of the best clips you could get would be footage of employees scanning around the turbines then hauling away the bodies. Camo gear would be very useful for this.

Reply (/cuisinarts-of-the-air/hiding-avian-mortality-ii-wolfe-island/?replytocom=21362#respond)

Jim Wiegand () • October 4, 2013 at 10:38 am

On October 3 I was given a new wind industry mortality study from Hatchet Ridge in Northern Ca. It is in my backyard so to speak.

Quote from the study……."Sources of Study Bias"

"Fatality estimates at the Project are calculated based upon search plots being established as 100 percent searchable areas; estimates were not corrected for any area not searched within a search plot. Because these types of corrections are dependent on sample size, these adjustments will not be made annually, but will be accounted for after the full 2-year study. Because there is probability that a carcass could land in the non-searchable area of a search plot and thus not be included in the estimate, fatality estimates presented for the Project likely include a downward bias".

The bias that exists in this study makes it completely worthless. The actual mortality numbers at Hatchet ridge are many times higher because (1) Estimates were not corrected for any area not searched within a search plot (2) search plots used for the study were more than ten times too small for the large turbines at Hatchet Ridge and the study did calculate this bias into their estimates. The area in which 85% of the carcasses can be expected to be found is 200 meter radius from turbine towers. (3) Searcher efficiency trial studies are unreliable and unrealistic.High searcher efficiency rates, which were factored into estimates are not accurate for the Hatchet Ridge habitat and were used to lower mortality estimates . 4) Search intervals should be 24 and no more than 48 hours. This methodology allows far too much time for scavengers and wind personnel to move bodies. (5) All 43 turbines should have been searched, not just 22.

There is nothing scientific about any of this. As with every other wind industry study I have looked at for their large turbines, I believe they easily missed and under-reported over 90% of the mortality. Like every wind project, from looking at the species mortality list I can see that the mortality footprint for this project reaches several thousand miles.

Lastly there is or was a peregrine falcon nest in the canyon area below the Hatchet Ridge wind project. Every year I used to see offspring or immature falcons in the upper regions of Shasta Lake. This is an area further down the Pit River canyon below the nest site. I have not seen any of these falcons for the last two years. I suspect that this nest could now be abandoned and this needs to be verified because wind turbines do kill peregrines falcons. If this nest is abandoned it should noted that it was one of the only active nest sites in CA that survived the DDT crisis.

Reply (/cuisinarts-of-the-air/hiding-avian-mortality-ii-wolfe-island/?replytocom=21363#respond)

Shellie Correia (http://mothersagainstwindturbines) • October 4, 2013 at 4:59 pm

I will definitely try to get footage of the employees as well. There is a forested area near the turbines that would give a perfect vantage point, while affording good cover.

Reply (/cuisinarts-of-the-air/hiding-avian-mortality-ii-wolfe-island/?replytocom=21364#respond)

jwiegand () • October 4, 2013 at 5:20 pm

What every your plans never reveal them ahead in an email or phone call. Years ago I caught the CA Dept of Fish and Game rigging/inflating their deer kill and population numbers. I was put under surveillance and my mail was filtered. I smoked them out one day by planting some false information and had important mail sent to an address unknown to them.

Reply (/cuisinarts-of-the-air/hiding-avian-mortality-ii-wolfe-island/?replytocom=21365#respond)

Shellie Correia (http://mothersagainstwindturbines) • October 4, 2013 at 5:25 pm

Awesome! Everything will be done incognito. I know the local people, and the local lands, much better than they do, and I have many people on my side, who will look out for me, and help me. They have hit a pocket of dissenters here, who refuse to be pushed around by the windbullies! Other than "exposing the truth about turbines", my life is undeniably normal, and they wouldn't get any thrill out of spying on me!!! LOL

Reply (/cuisinarts-of-the-air/hiding-avian-mortality-ii-wolfe-island/?replytocom=21366#respond)

Margaret Atwood, Elizabeth May, Naomi Klein: Climate handmaids fail—to tell the truth | FAUXGREEN (https://wolfhillblog.wordpress.com/2014/09/20/margaret-atwood-elizabeth-may-naomi-klein-climate-handmaids-fail-to-tell-the-truth/) • April 22, 2015 at 10:37 am

[…] numbers wherever they are located. Why doesn't Atwood tell the whole truth about how all industrial wind turbines brutally slice and dice any avian creatures that get in their way (ironically while actually adding to CO2 emissions)? What kind of […]

Reply (/cuisinarts-of-the-air/hiding-avian-mortality-ii-wolfe-island/?replytocom=27545#respond)

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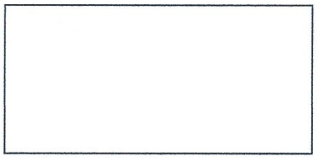

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Institute for Energy Research (http://instituteforenergyresearch.org/)

Knowledge Problem (http://knowledgeproblem.com/)

LOCATION, LOCATION, LOCATION ... MIGRATION, MIGRATION, MIGRATION

As a biologist-photographer who specializes in the nature spectacles of Canada, I've seen my fair share of wildlife wonders over the years. Some of the highlights that immediately come to mind include the massive seabird colonies and humpback whales of Newfoundland; the dazzling gannet colony of Ile Bonaventure in Quebec; butting bighorns, bugling elk and grizzlies in the Rockies; blizzards of tens of thousands of snow geese in British Columbia, the Prairie Provinces and Quebec; sage grouse dancing in southern Alberta; wolf howling and viewing in Ontario's Algonquin Park; polar bears and belugas in Churchill, Manitoba; tens of thousands of crooning sandhill cranes in flight in Saskatchewan ... the list goes on and on.

When the world renowned American Museum of Natural History in New York came out with its first wildlife calendar in the early '90s, I was the only Canadian represented – with an attention-grabbing photo of a puffin from New Brunswick's Machias Seal Island, its mouth crammed full of herring. Of all my thrilling encounters at wildlife hotspots over the years, both in Canada and abroad, my favourite memory is that of 45 killer whales visiting a rubbing beach off Vancouver Island – three of the black-and-white giants lined up sideways abreast of each other underwater, sliding through pebbles a mere 25 feet away (while a surfacing humpback "trumpeted" not far offshore). To put it mildly, I've experienced quite a few outstanding wildlife events in my time.

Even so, having spent my teen years and early twenties in Canada's Deep South -- southwestern Ontario's Essex County -- I have to admit that the world famous migrations of that province rank right up there with the best of the best. What naturalist would not be impressed with the kaleidoscope of colour and sound in May when spring warbler migration is at its peak? Or tickled pink in March when the continent's entire eastern population of tundra swans drops into the marshes and cornfields of the province after flying nonstop from the Atlantic seaboard? In autumn, the swans and warblers are upstaged by tens of thousands of hawks flying south to distant wintering grounds as far afield as Central and South America.

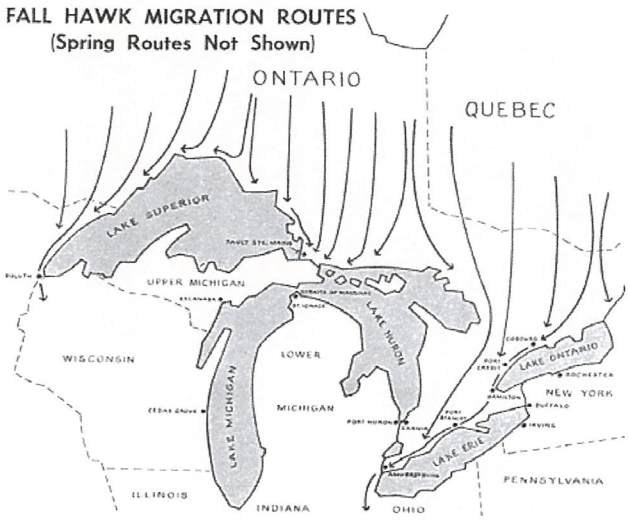
Up until my near-religious experience with the beach-rubbing orcas, the precious memory of seeing 38,000 broadwinged hawks migrating over the north shore of Lake Erie at Holiday Beach Conservation Area on September 16, 1986 held sway as my all-time favourite, due to the rarity of the event as well as the sheer spectacle. At times on that glorious day, three-tiered "kettles" of spiralling broadwings, totalling more than 1,000 birds, were in the air overhead. Mind boggling! As fellow enthusiast "Fran" of Buffalo, New York, a veteran hawkwatcher in her sixties who had been to numerous spring and fall hawkwatches around the U.S. Northeast and Canada, excitedly exclaimed: "I've waited all my life to see this – and I've birded a lot!"

CANADA'S GREATEST MIGRATION CORRIDOR

So what makes Ontario such a great place to see spectacular concentrations of aerial migrants like those hawks and warblers? As the old real estate mantra goes, it's *location, location, location.* The

southern half of the province holds a geographic advantage – the formidable barrier formed by the Great Lakes -- which makes it one of the greatest migration corridors on the planet. Since it's dangerous business flying over immense watery expanses, especially if unexpected storm fronts should move in, most winged travellers wisely follow the lengthy shorelines until a safe crossing point or exit can be found.

As the crow flies, it's 1300 kilometres (800 miles) from the extreme western tip of Lake Superior to the far northeastern end of Lake Ontario. Millions and millions of migrants of all stripes and sizes – birds, bats, monarch butterflies, dragonflies, wasps, ladybugs and other insects -- either veer around the outer edges of that barrier (at Duluth, Minnesota, or east of Watertown, N.Y., for example), cross near the halfway mark of Sault Ste. Marie, hopscotch across the water using the Manitoulin Island-Bruce Peninsula route or flow into the geographic funnel of southwestern Ontario often banking up and concentrating against Lakes Ontario, Huron or Erie enroute – depending on wind direction and force. Each fall, a good many of the migrants pouring south out of the vast breeding grounds of northern Ontario, Quebec, Labrador and even portions of the Eastern Arctic Islands end up in that confining migratory funnel. At its narrowest point, between Lake St. Clair and Lake Erie near Tilbury, Ontario, the funnel is only 32 kilometres (20 miles) wide. Since many hawks, like broadwings, must hitch energy-saving rides upward on thermals, or air currents arising from warm ground surfaces, then glide onward for miles until the next aerial elevator is reached, crossing a large body of water is to be avoided at all costs. That's why so many migrating hawks and other raptors, or birds of prey, are seen around the shores of the Great Lakes compared to other locations across the continent.

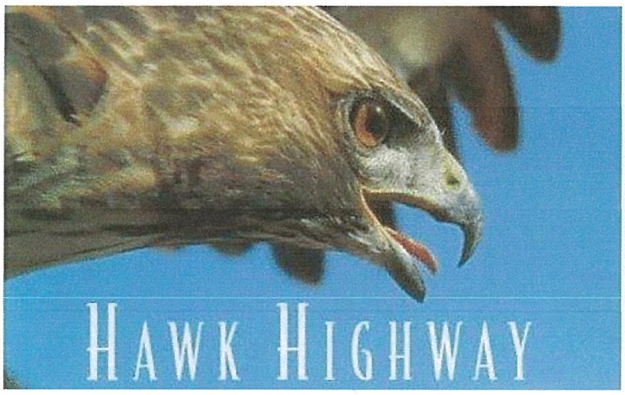


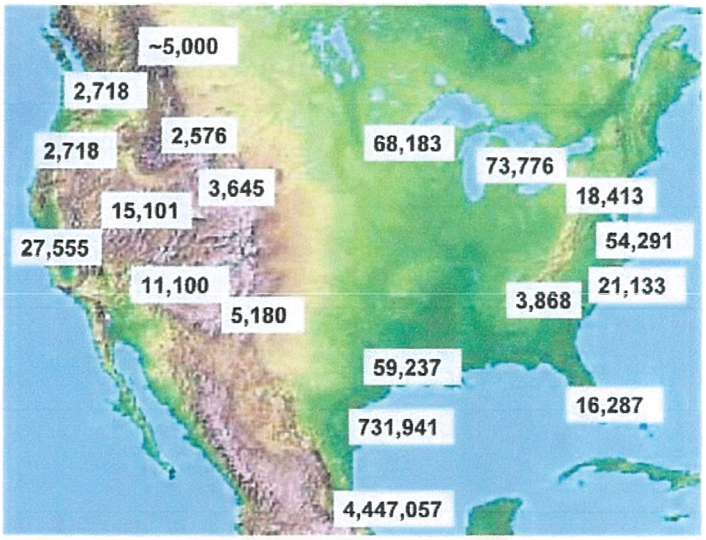
The highest migration counts in Canada and most of the continent are tallied in and around Ontario's southwest with the Holiday Beach Conservation Area and adjoining Big Creek marsh near Amherstburg – at the funnel's end -- clocking up as many as 750,000 migrant birds during the fall season, 50% of which may be blue jays and 25% raptors. Some of the single day records from here are astounding: 95,499 broadwinged hawks on September 15, 1984; 264,410 blue jays on September 28, 2001; 614 great blue herons August 16, 1999; 195 great egrets September 1, 1996; 5 whooping cranes November 7, 2004; 604 ruby-throated hummingbirds September 13, 1997; 5884+ monarch butterflies September 15, 1997 and 2000+ common green darner dragonflies during a three-hour count on September 21, 1999[1]. Point Pelee National Park, nearby, shines brightly

[1] www.hbmo.org

during spring warbler migration when visitors from around the world partake in an avian love-in unmatched anywhere else in Canada, but also holds its own in autumn with the amazing gatherings of migrating monarch butterflies. At daybreak on September 17, 1996, on Point Pelee's East Beach, a bleary-eyed group of birders in search of a rarity came across a once-in-a-lifetime vision: a massive flight of monarch butterflies that filled the entire horizon and numbered around the half-million mark. A spectacle to be sure! Not surprisingly, the park was designated as an International Monarch Butterfly Reserve about the same time. Based on those bountiful butterflies, birds and other natural attractions, in June 2007, Explore magazine ranked Point Pelee third on a list of the country's best parks for wildlife (after Banff and in front of Wood Buffalo National Park).

The late great birding dean, Roger Tory Peterson, placed Pelee near the very top of his list of dozen birding hotspots on the continent and that expert opinion continues to be supported by many others[2]. Other lesser-known points and peninsulas along the province's shores offer similar concentrated natural treasures during migration periods. For that reason, among others, Ontario was ranked fifth overall in the top ten best "states" for birding hotspots in that Top 50 link.



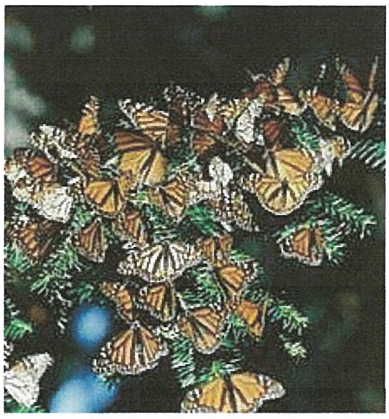


Magnitude of autumn raptor migration at selected 'watchsites'.
(source: HawkWatch International)

Source of migration magnitude map: Bird Fatalities at Wind Energy Facilities: An Overview (2006) by Carl G. Thelander.

[2] www.birder.com/birding/hotspots/index.html (click link on the left for the Top 50) + www.mac-web.org/Projects/DiscoverOurWildSide/BywaysToFlyways.htm





MIGRANTS, IWTs AND TOURISM DOLLARS

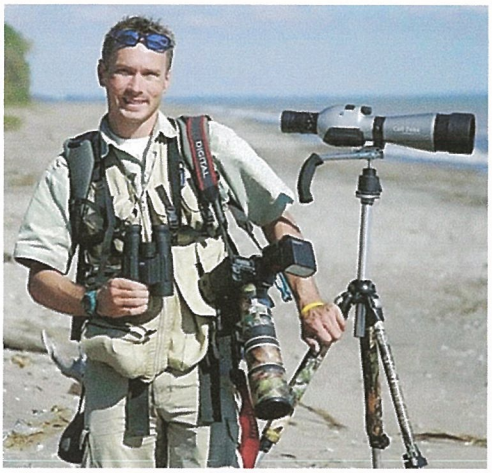
Clearly, the shorelines of Ontario's Great Lakes are altars upon which naturalists worship. On peak days, it's possible to see more hawks, monarch butterflies and other migrants than almost anywhere else in North America. In very few other locations on earth can you find these ideal conditions to watch the miracle of migration unfold. Yet a threat looms large on the horizon which could unravel that miracle in the coming decades: the Industrial Wind Turbine (IWT).

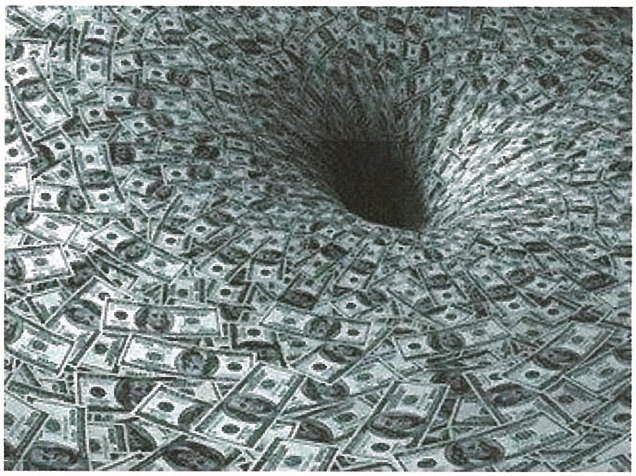
These gigantic turbines are not the picturesque windmills of old which melded into the landscape. They are 400-foot-high monstrosities with blades that sweep an area the size of a football field. Although they appear to move slowly, the tips of those giant blades rotate at 150 to 200 mph. With thousands of IWTs slated to be installed along the shores of the lower Great Lakes – both onshore and offshore – the eons-old migration routes are no longer safe. To date, there has been no comprehensive planning on the part of the Ontario or federal governments regarding the cumulative effect of this form of industrial development. Normal caution has literally been thrown to the wind in the rush to appease those who think wind turbines are the solution to global warming. Unfortunately, as all independent evidence emphatically points out, they most certainly are not the answer.

Those who view the loss of a few "dickie birds" and other migrants due to turbines as no big deal should read *The Importance of Nature to Canadians* published by Environment Canada: In 1996, Canadians spent 11 billion dollars pursuing nature-related activities. Each spring, the local economy around Point Pelee National Park – the number one tourism draw in southwestern Ontario -- is pumped with 12 to 14 million birding dollars. That's hardly chump change. Remember Fran of Buffalo,

N.Y. who visited Holiday Beach in search of its legendary broadwing flight? She and other border-crossing Americans drop many welcome dollars into the economy, too.

U.S. birders spend an astounding $36 billion in their own country each year but also spread the wealth northward. In the week prior to our meeting, Fran had been to the fabled Hawk Cliff[3] on Lake Erie near Port Stanley, Ontario and rated it as being better than the much touted Hawk Mountain of Pennsylvania -- and likely passed that opinion along when she got home. After her spectacular adventure at Holiday Beach, she was heading west to Duluth. How many dollars did she contribute to local economies along *her* migratory path? Americans are an overlooked gift horse: they, alone, add 705 million, nature-related dollars to the Canadian economy each year.





Watching warblers from the boardwalk

Yes, it's true that a small number of gullible/greedy farmers leasing out land for IWTs and short-sighted municipalities reaping wind energy tax revenues will benefit economically from the industrialization and marginalization of their regions – but never forget that there are many tourism dollars at risk that more than offset that blood money. In the coming years, the easily gathered "30 pieces of silver" from wind

[3] www.ezlink.ca/~thebrowns/HawkCliff/

energy developers may come with a steep price both economically and environmentally.

Will Fran and other U.S. wildlife enthusiasts be tempted to cross the border and drop their tourist dollars in the province if all they see for hundreds of kilometres along Lake Erie/Huron/Ontario/St. Clair are endless strings of industrial towers with twirling blades, both onshore and off? Will birders and butterfly watchers from Toronto tire of the same industrial scenery and skip those trips to Point Pelee for something closer and less cluttered? When it comes to tourism dollars, extreme caution needs to be taken regarding the cumulative effects of multiple wind farms as demonstrated in the U.K. recently[4].

Considering that so many of the IWTs and associated service roads, transmission lines and substations are going in or near Category 4 "highly sensitive environmental areas", why is it that no full environmental assessment review has been undertaken for *any* wind energy project in the province? What are the government and industry trying to hide? The answer: Plenty.

To date, all that's been required before the government rubber-stamps a deal is a quickie environmental screening report – conducted, of course, by the very companies that are doing the projects. Talk about the fox guarding the hen house. As most concerned naturalists eventually discover, you can't trust anyone: "We at the Ripley hawk watch [on the U.S. side of Lake Erie] have learned that we cannot depend upon developers, the federal government, state government or local government to make the right decisions when raptors and other important natural resources are involved.[5]"

MORE AND ONWARDS: ODE TO GREAT LAKE VIEWSCAPES

Not content with stringing hundreds/thousands of giant swirling IWTs as gauntlets along the migration super-highways onshore, the wind energy companies have set their sights on the pristine waters offshore as well. Their motto? "More and onwards!" (Henceforth, let's shorten that and tag them as "more-ons".) Making matters worse, guess who controls the lease rights to the lakebeds where those more-ons want to dump their disruptive IWTs? Yes, the bungling bureaucrats and politicos in the provincial government. Break out the rubber stamps! Doesn't that give you a warm, fuzzy feeling all over?

Taking a look at the maps at the back of the 2008 Helix Energy report, *Analysis of Future Offshore Wind Farm Development in Ontario*[6] it's obvious that the extinction of uncluttered vistas over some of the Great Lakes is a distinct possibility. Like the once-abundant passenger pigeon, those taken-for-granted views could be gone in the coming decades, especially along the shores of Lake Erie. Although the report plainly states that national parks and sensitive environmental areas are to be avoided, there is

[4] www.thesouthernreporter.co.uk/news/Our-hills-are-alive-with.5774155.jp.

[5] www.hmana.org/articles (Turbine article) www.hmana.org/hms.php (Fall 2007 pages 5-7)

[6] www.savethebluffs.ca/articles/General/helimax.asp

one large development block positioned right off the East Beach of Point Pelee National Park. Remember that incredible flight of a half-million butterflies in 1996 that I mentioned earlier? Those fluttering monarchs migrated south over Lake Erie exactly where that development block is pencilled in.

Point Pelee may be known for its migrating butterflies and birds but it also offers something found nowhere else in this great country of ours: a clean, open view from the southernmost tip of mainland Canada. In fact, the primary goal of many of the hundreds of thousands of annual visitors who arrive at the park is simply to take in the breathtaking scenery from that sacred spot. It's also a much-needed refuge for those in search of recreation, reflection and simple spiritual renewal. Add even one wind tower to the primordial scene before them and you effectively deflower it. In recognition of its unique siting and qualities, Pelee's sandy tip was recently honoured with the opening spread in an article about the best beaches across the country[7].

To safeguard its extraordinary attributes, a 20-kilometre-wide "no development zone" should immediately be put into effect in the waters surrounding the park. (A similar concept, restricting motorboats, is in place on a smaller scale off two land-based whale watching areas in the Saguenay-St. Lawrence Marine Park.)

The unique viewscapes offered at the sandy tip and along the east and west beaches are fundamental assets of the park – assets that should be protected for present and future generations as mandated in the Parks Canada Charter. All Canadians, be they from Vancouver, Whitehorse, Edmonton, Montreal, Halifax or Iqaluit, have a right to see those priceless national heritage views intact – views which have not changed significantly since the time of the first explorers.

Ironically, and tragically, a wind project is currently proposed off Pelee's West Beach in Pigeon Bay, so named for the passenger pigeons which once blackened the sky overhead. Could one folly of that magnitude – the extinction of an entire species – be followed by another grave error that we'll regret for generations? Perhaps someone could explain to me why one of the first offshore proposals in the entire country is on the doorstep of Canada's premier migration hotspot, a national park already under threat? *That should be the very last place in Canada to propose any offshore IWTs, not the first*.

What this sad example illustrates is the complete lack of respect shown by both the wind energy industry and the provincial government for even internationally important, top-tier natural areas. Keep in mind that the original proposal was for 119 offshore turbines and the 15 mentioned now are merely

[7] www.canadiangeographic.ca/travel/travel_magazine/may08/25_sandy_escapes.asp

starting points for future add-ons. Several years ago, Nature Canada ranked Point Pelee as number three on its Most Endangered National Parks List[8]. As Park Superintendent Marian Stranak admitted: "We're on [Nature Canada's] list because the park is located in the most populated, most people-altered part of this country. When you start layering stuff on top of that, you soon realize why we're threatened"[9].

AN ILL WIND BLOWING

To warm you up for the final IWTs versus Wildlife section – and to see where I'm coming from – please read Calvin Luther Martin's forthright and honest treatise *How to Fight the Big Wind Onslaught*[10]. I suggest skipping to chapters 7 and 9 to get right to the heart of the matter. Calvin is the husband of Dr. Nina Pierpont who diligently studied the negative effects of IWTs on human health and compiled them in her groundbreaking book, *Wind Turbine Syndrome*[11]. After hearing from victims worldwide, the couple has absolutely zero tolerance for the lies, half truths and propaganda being dished out by the wind energy industry. According to the puffing wind industrialists, their benign IWTs substantially reduce GHG (greenhouse gas) emissions and will save the planet. In reality, they don't and won't. But they do substantially increase another form of GHG: Greed, Hubris and Gluttony.

Big Wind hucksters boast that there are five C's involved in their intercourse with a targeted community (read *screw job*): Communication, communication, communication, construction, communication. In reality, there are five P's: Propaganda, propaganda, propaganda, project construction, and propaganda. If some brave, intelligent souls stand up and object to a project with valid concerns, the Big Windies shout them down with the standard refrain of "NIMBY, NIMBY, NIMBY" (with backup chorus provided by cronies in the government and brainwashed, gullible Greenies). Hubris abounds.

In a 2006 newspaper article, John Keating, CEO of Canadian Hydro Developers Inc. – the company responsible for transforming bucolic Wolfe Island into an industrial wind ghetto with 86 turbines – had this to say about the fierce local opposition on that island: "We try to make sure [the 400-foot-high unsightly IWTs] are sited correctly and that we have great community support. There will be several hundred thousand people in a region and maybe 10 of those people object. Those 10 have the capability of holding up a $400-million project." 10? Really? Is that what it was? Honest Abe Lincoln said it best: "You can fool some of the people all of the time and all of the people some of the time, but you cannot fool all of the people all of the time." Wolfe Island and nearby Amherst Island, by the way, are (were?) two of the greatest wintering areas for owls and hawks in the entire continental Northeast.

Now that you're getting warmed up to the subject of invasive IWTs, please continue with *Wind Turbines: Offensive Industrialization of Human Space*[12] by Horejsi, Gilbert and Wuerthner. As Aldous Huxley once wisely observed: "Facts do not cease to exist because they are ignored." Fact: Wind

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[8] www.canadiangeographic.ca/Magazine/so03/indepth/pelee.asp

[9] www.lakeeriewindturbines.com/about/

[10] http://savethetorontobluffs.com/How%20to%20fight%20Big%20Wind%204-8-09.pdf

[11] www.windturbinesyndrome.com

[12] www.canadafreepress.com/index.php/article/4163

Energy = Next-to-No Energy. Wind energy is a 98 pound weakling that needs to have an Incredible Hulk (nuclear, hydro, coal-fired or natural gas plant) running behind it on full standby at all times to provide reliable muscle power. When I had a look at the IESO website at 10 a.m. on November 8, 2009, the total wind output in Ontario – of a theoretical maximum of 1,100MW -- was a pathetic 28MW, or as the IESO cutely put it "enough to run 4,000 clothes dryers".

Here's a thought: Why not hang the clothes outside or on an indoor drying rack and save yourself the millions/billions in tax subsidies and increased electrical rates? Another dazzling bit of news from the IESO, "Ontario's wind farms are located across the province – ensuring a diversity of wind energy supply." 28MW? From diversification? Even on good days, when the wind does blow somewhere in the province, the Incredible Hulks are running on standby, ready to pick up the unreliable wind load when it falters. Is that not a duplication of effort and capital expenditure, resulting in much higher electrical rates? As for cleaning up the air for asthmatics and other health sufferers, IWTs are almost a complete failure. According to *Smog Daze*, an article by Sarah Scott in the Summer 2006 issue of *ON Nature,* "even if we removed every single vehicle from the road and shut down every coal-fired power plant, ozone levels would decrease by only 1 to 16 percent depending upon location." Why? Partly because it's an international problem and we're on the receiving end of it [13].

Incidentally, because of the size of Canada, it is transportation that produces most of the country's GHGs (25%) not electricity generation (17% of the total). And in Ontario, close to 75% of the electricity generated is already GHG-free, with the remainder in future coming principally from natural gas plants *if* the coal-fired plants actually close. (Oops, sorry, those gas plants are the government's dirty little secret.) Another fact: If there are widespread regional blackouts due to grid problems – as experienced during the infamous Northeast Blackout of 2003 – all those IWTs, assuming there's wind and they're actually working for a change, will also go dead. (Government dirty little secret #2: IWTs need to be jumpstarted with electrical juice from the grid to operate; no juice, no go.)

It's worth mentioning here that although IWTs currently enjoy high popularity ratings with members of the propaganda-fed general public, the same popularity was accorded DDT at the height of its use. Rachel Carson, who wrote Silent Spring in 1962, realized the obvious: Technology, no matter how beneficial it first seems, can disrupt entire natural systems for decades or centuries. If Carson – a keen hawkwatcher -- was alive today, I can tell you which side of the wind issue she'd be sitting on and it wouldn't be with the largely unregulated, profit-driven corporations that have little regard for wildlife, rural residents or natural landscapes. To see the striking similarities in the political handling of DDT and IWTs – the government cover-up of negatives, the uncontrolled industry propaganda, the deceitful supporting "expert evidence", etc. – please watch the PBS American Experience program, "*Rachel Carson's Silent Spring*". One shining example of a pioneering anti-DDT/IWT campaigner is birding legend and honoured scientist Chandler Robbins[14].

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[13] www.airqualityontario.com/science/transboundary.cfm

[14] www.pwrc.usgs.gov/whatsnew/events/robbins/usgs_news.cfm

WE HAVE MET THE ENEMY AND HE IS US

The sad truth is, thousands of IWTs will have about as much effect in battling global climate change and air pollution as you would have peeing on a four-alarm fire in hopes of putting it out. If you'd like to see GHGs as well as air pollution reduced, forget about turbines and get out of your vehicle and walk, bike, rollerblade or take transit. And cancel those winter flights to Jamaica or Mexico or Cuba or wherever else you and the millions of other air-polluting jetsetters have to get to. Stay home and lower your thermostat setting; in summer, cut back on the use of your air conditioner or shut it off completely. Those acts alone will clean up the CO2 levels in the atmosphere far faster and more effectively than thousands of unreliable, don't-produce-what-they-promise IWTs. And, besides, 50 years out, won't you feel kind of stupid looking at all those rusting IWTs everywhere (don't expect the more-ons to clean up after themselves) while billions of eager Chinese and Indian consumers mimic our energy-guzzling, polluting ways thereby *really* tipping the planetary climate cart?

In a strange twist, IWTs can cut into their own slim climate positives. According to the May/June 2006 issue of *Canadian Geographic*: "Wind farms have been increasingly touted as a way of generating energy without producing CO2 emissions. But [Environmental Scientist of the Year, David Keith] knew enough about atmospheric sciences to realize that building massive arrays of wind-powered turbines would have some unintended climate impacts, locally and globally. Using computer climate models, Keith and his colleagues showed that extracting wind energy on a large scale changes wind patterns, which, in turn, could change the local or regional climate by altering the amount of heat and moisture transported by the winds...The research found that the unintended cost of harnessing the wind may be as much as one-fifth of the intended climatic benefit."

Let's finish our industrial exploitation tutorial with Dr. John Etherington's *The Wind Farm Scam*[15] (Would it surprise you to discover that the first printing of his book sold out in less than two months?) If the government truly wants to tackle the issue of global climate change in a meaningful manner, I suggest it invests in "green" solar-run condom factories and dispense the proceeds into Toronto, the entire Golden Horseshoe and other urban centres -- and control immigration while they're at it. Alternatively, pass a draconian No Impact Energy Act – in place of the draconian Green Energy Act -- and actively enforce it in those same energy-wasting metropolitan areas[16].

Unrestrained population growth – the planet's four-alarm fire -- is the real problem and is not "fixed" by blanketing the rural landscape and Great Lakes environments of Ontario with thousands of IWTs. That's hard reality versus green fantasy and glib propaganda. The Chicken Littles in the crowd -- the panicked ones screeching "Do *something*, do ANYTHING!" to combat the urgent "crisis" of global climate change – need to calm down and get their facts straight, both worldwide[17] and in North

[15] www.wind-watch.org/news/2009/09/15/environmental-scientist-exposes-wind-farm-scam/

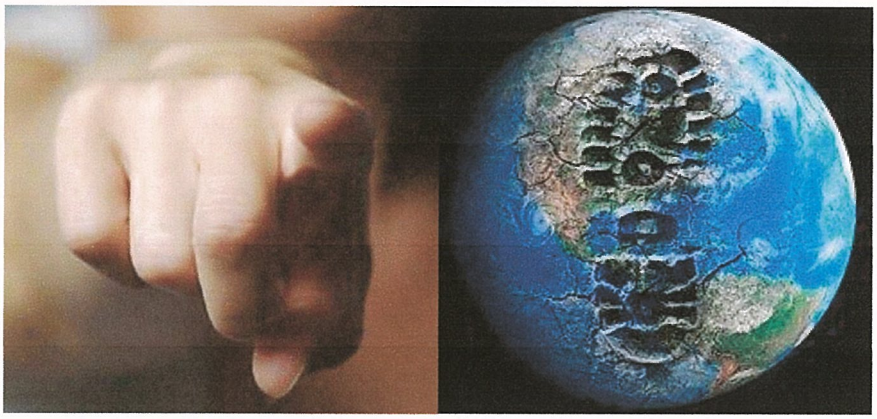
[16] http://noimpactproject.org/

[17] www.time.com/time/health/article/0,8599,1739253,00.html

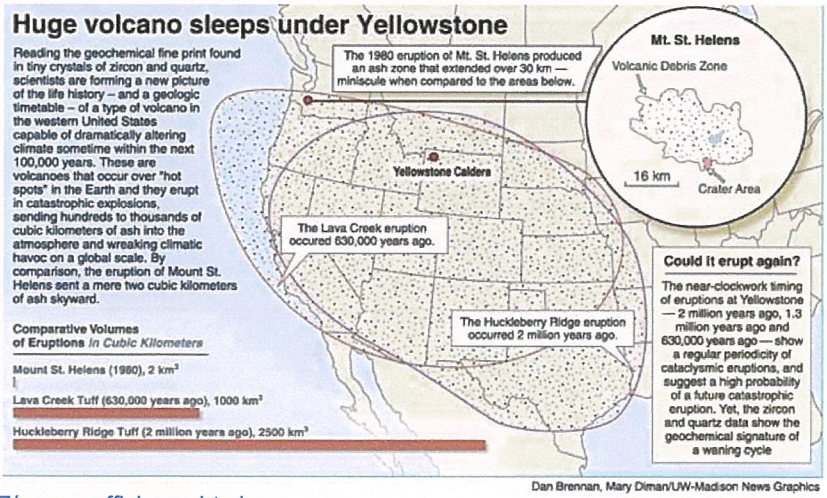
America[18].

We've improved energy efficiency but squandered the gains with monster homes (with bigger spaces to heat, light and cool), gas-guzzling vehicles and more electrical gadgets. IWTs are not the solution to idiocy. As Pogo lamented: "We have met the enemy and he is us."

Check your ecological footprint at the Royal Saskatchewan Museum website[19] or the more basic Zero Footprint Kids website[20]; note that carbon offsets merely allow wealthy individuals to "offload" their selfish impact, usually by dumping IWTs in rural areas around the globe. The solution in a nutshell: Fewer affluent offspring + resulting reduced consumerism = Less pollution of any sort."[21]



Still fretting about climate change? Then consider this: 18,000 years ago – a mere blink in geological time – Canada was covered by an ice sheet three kilometres thick. Millions of years before that, the arctic was a tropical swampland with crocodiles and redwood trees. If a major volcano erupts – on the scale of a Mount Toba or a lot less – any global warming caused by the human population will be welcomed, not cursed[22]. Climate change is a given, regardless of the actions of *Homo sapiens*, and some versions from Mother Earth come with extremely severe cooling consequences.



[18] www.cbc.ca/money/story/2007/11/27/energyefficiency.html

[19] www.royalsaskmuseum.ca/gallery/life_sciences/footprint_mx_2005.swf

[20] www.zerofootprintkids.com

[21] www.guardian.co.uk/commentisfree/2009/oct/25/alex-renton-population-control-climate-change

[22] www.bradshawfoundation.com/evolution

But I digress...let's move right along to the main IWTs versus Wildlife dust-up:

INDUSTRIAL WIND TURBINES VERSUS WILDLIFE (AND WILD LANDS): THE INTANGIBLES

"We talk about natural resources as if everything had a price tag. You can't buy spiritual values at a shopping mall. The things that uplift the spirit – an old growth forest, a clear river, the flight of a golden eagle, the howl of a wolf, space and quiet without motors – are intangibles."

George Schaller *National Geographic October 2006*

Remember that real estate adage, location, location, location? Golden eagles and other winged migrants share something in common with wind energy developers: They both like exactly the same breezy locations. In eastern North America, that includes the shorelines of the Great Lakes and the mountain ridgetops of the mid-Atlantic States where strong updrafts occur. According to nature, wildlife, birding and conservation organizations around the globe – all of which are in favour of renewable energy including wind turbines *in theory* -- IWTs should not be located in environmentally sensitive areas, especially significant migration corridors.

The Audubon Society states: "raptor migration bottlenecks in the Northeast, should be largely avoided." BirdLife International chimes in with the same advice, cautioning developers to stay away from major migration routes, especially migration bottlenecks. Are they avoided in Ontario and elsewhere? Nope, not if the more-ons have anything to say about it. Why? *Because that's where the wind blows the strongest so bugger everything else*. Did I mention that the quickie environmental reviews are proponent-driven? And that BIG $$$$ are involved in the tax subsidies, write-offs, lease fees, municipal tax revenues and overly-generous fixed revenue from higher electrical rates? But what about the negative impacts to rural residents, tourism, significant viewscapes and wildlife? There aren't any! Well, none that the windies will admit to. (Watch the following movies for insight on ethics and Big Business practices: *A Civil Action* with John Travolta, *Erin Brockovich* with Julia Roberts and *The Insider* with Russell Crowe.)

Before After

GONE WITH THE WIND: LESSONS LEARNED IN THE USA AND OVERSEAS

USA: Trading One Ecological Crisis for Another

Regardless of the beguiling, "we do no harm" claims from the wind energy industry, some very dirty truths came out of the testimonies given in the 2007 U.S. Congressional Hearing appropriately titled "Gone with the Wind: Impacts of Wind Turbines on Birds and Bats." Dr. Donald Michael Fry, Director of the Pesticides and Bird Program of the American Bird Conservancy, didn't mince words: "**Unfortunately, to date, collaborative efforts to successfully address the impacts of wind projects on birds and wildlife have been a failure** [the bold type is his]...My experience with [the National Wind Coordinating Collaborative], however, has been that there has been much discussion and almost no real action on the part of the wind industry to resolve bird collision issues at wind project areas.

The wind energy industry has been constructing and operating wind projects for almost 25 years with little state and federal oversight. They have rejected as either too costly or unproven techniques recommended by NWCC to reduce bird deaths. The wind industry ignores the expertise of state energy staff and the knowledgeable advice of Fish and Wildlife Service employees on ways to reduce or avoid bird and wildlife impacts. **Federal and state oversight for wind energy projects has been virtually nonexistent**". But, wait, it gets even better: "Not a single prosecution for take of eagles has been brought by federal officials, and no adequate explanation has ever been provided to explain why the Bald and Golden Eagle Protection Act has been ignored for so long. The Fish and Wildlife Service developed an interim series of voluntary siting guidelines in 2003, and revised them after a prolonged comment period in 2005. Federal guidelines must be required rather than voluntary.

The wind industry has provided ample evidence that voluntary guidelines are regarded as unimportant and are thus summarily dismissed." Fry also added a few gory details on kills: "Birds and bats killed by wind turbines are searched for by field teams at infrequent intervals, and the methods to extrapolate to the true number of birds or bats killed still remain controversial. For example, it is unknown whether small birds struck by a turbine blade moving with a speed greater than 150 mph remain intact, or whether they disintegrate into a 'poof' of feathers and small fragments. It is unknown how far carcasses of small birds that do remain intact can be catapulted by a turbine blade that is 130 feet long

traveling at 150 mph...**At the current estimated mortality rate, the wind industry will be killing 900,000 to 1.8 million birds per year**." [emphasis is mine]

So are the regulatory guidelines still voluntary? Hint: Some things never change ... (Full testimonies available here.[23])

A year later, Fry wasn't any happier: "Somebody has given the wind industry a get-out-of-jail-free card."[24]

Mike Daulton, Director of Conservation Policy for the National Audubon Society, didn't offer any encouragement at that hearing, either: "Scientists are particularly concerned about the potential cumulative effects of wind power on species populations if industry expands dramatically...to generate 5 percent of the nation's electricity by 2020 using average size (1.5 MW) wind turbines, would require more than 62,000 additional turbines to be constructed in the United States, adding to the more than 16,000 turbines already constructed...Currently there are no mandatory federal regulatory standards, and few state standards, regarding the design or siting of wind power facilities to reduce risks to birds and other wildlife...Siting decisions are often made based on wind resources, ease of access to land, and accessibility of transmission lines.

At present, little or no effort is made to coordinate the siting of wind facilities at a regional scale to avoid conflicts with migratory birds and bats. At the local scale, minimal pre-construction inventories of bird use are conducted to assess potential risks to birds. Furthermore, because there are no widely recognized standards for unacceptable levels of mortality and other risks such as displacement, it is rare for a wind power proponent to reject a site solely on the basis of risks to birds." In other words, *it's a veritable free-for-all out there*!

Next up, with more doom and gloom, was Edward B. Arnett, Conservation Scientist for Bat Conservation International: "Current and projected fatality rates should provide an important wakeup call to agencies, developers, and decision makers to support additional monitoring and hypothesis-based research to address a growing concern of national and international importance...An unfortunate reality is the fact that if a responsible developer decides to abandon a particular site because of environmental sensitivity, there are no state or federal regulations that prohibit another developer from pursuing a wind project on that site...Kunz et al. (2007) projected numbers of bat fatalities in the Mid-Atlantic Highlands from wind turbines expected to be installed by 2020...they projected 32,818 to 64,281 would be killed in just one year in this region under the assumptions used. The potential for serious cumulative impacts is obvious in just this one region and when considering all regions continent-wide and over the full life of a project (20-25 years), the numbers escalate rapidly and heighten concerns." Now that's an understatement if I ever saw one.

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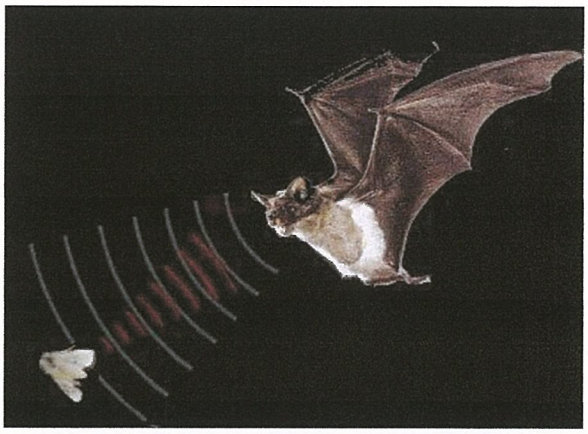
[23] www.fws.gov/habitatconservation/windpower/wind_turbine_advisory_committee.html and www.ecwag.org/Research_Testimonies.php#10

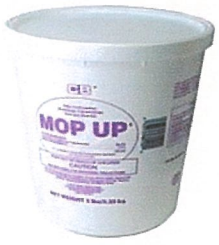
[24] http://online.wsj.com/article/SB10001424052970203706604574376543308399048.html



Extrapolating from those figures, one could estimate, continent-wide, that more than 250,000 bats might be at risk every year. Recently, a promising fix – reducing the amount that turbine blades turn in low wind speeds – was found to decrease bat deaths in one IWT array in southern Alberta by up to 60 percent. But that still leaves the other 40 percent to worry about – assuming the recommended fix is even applied by all companies -- and 40% of 250,000+ is **a possible annual cull of 100,000+ North American bats.** Why worry about bats? Because they're the only major predator of night-flying insects, consuming more than 50 percent of their own body weight in insects in the wee, dark hours. That translates into big dollars for farmers and foresters since a bat's targets include agricultural pests such as beetles, moths and leaf-hoppers. Their voracious appetites for West-Nile-virus-carrying mosquitoes are also much appreciated. Remove 100,000 bats from the environment and you allow more than a ton of extra insects – 450 million of them – to roam free each night *and every night thereafter*. That compounds and adds up – in agricultural dollars and cents.

Dale Hall, Director of the U.S. Fish and Wildlife Service, made his appearance at those hearings and sheepishly summed up the enforcement policy of his department: "Rather than seeking to prosecute wind power facilities companies when mortality events occur, the Service prefers to work with companies to encourage them to take mitigation steps to avoid future harm." In other words, "mortality events" are swept under the carpet and accusing fingers are wagged at the big, bad windies. Nothing else is done.

As mentioned elsewhere in the reams of testimony, when the Service does provide expert advice, it usually gets the finger in return. Take for example, West Virginia's Mountaineer wind factory operated by Florida Power & Light: When scientific studies revealed that the ridgetop array had killed up to 4,000 bats in one season – with more to be whacked in the years following – the company refused to allow any more research to be undertaken. Dead bats? None here! The Feds? They probably gave FP&L a few words of encouragement about cleaning the mess up and then departed.



The most piercing observation at the congressional hearing came from Eric Glitzenstein, President of the Wildlife Advocacy Project: "no agency is even evaluating the *cumulative* effects of present and

planned wind turbines on at-risk wildlife species, let alone incorporating such analysis into a precautionary regulatory regime. Accordingly, in the absence of further federal safeguards, **it is inevitable that the nation will, perversely, wind up creating a new ecological crisis in the guise of addressing another one."** [emphasis is mine]

Much was learned from those hearing testimonies – and it wasn't good news. What goes on south of the border impacts us directly because our migrants pass through American states enroute to their wintering grounds and then must return again in spring. And it's a long trip between those destinations, especially if winters are spent at the tip of South America. While slurs of "NIMBY" routinely arise in local development battles, the issue goes far, far beyond personal backyards.

A great overview of migration concerns in the eastern U.S. is presented in an Audubon chapter's video entitled *A Rough Wind: The Impact of Industrial Windmill Facilities on Birds and other Wildlife*. In little more than two decades, IWTs will explode in the Allegheny region from 131 to 16,000[25]! Chandler Robbins -- renowned birdman and author of the early birding Bible *The Golden Field Guide to Birds of North America* – makes a couple of brief appearances in that film to speak out against this growing madness. In addition to the thousands of invasive IWTs being plonked down everywhere, don't forget about the infrastructure that goes with them. Note that the U.S. is currently much more dependent on fossil fuels for energy than Canada is. Roughly 70 percent of their power comes from fossil fuels (predominantly coal) while 61 percent of ours is hydro derived and therefore lower in GHG emissions (in four provinces – B.C., Manitoba, Quebec and Newfoundland-Labrador – hydro use approaches 100 percent).

So that's the situation south of the border. All the bat and bird conservation groups in the U.S. support IWTs *in theory* – i.e. if they are located in suitable locations that don't impact wildlife -- but choke on the damned things when they're analysed in the hard, cold light of day. As a rule, it's almost always *worst* location, location, location.

Overseas: Shoot First, Ask Questions Later

In Europe and elsewhere, it's the same story with different players.

The Royal Society for the Protection of Birds in the U.K. theoretically loves renewable energy, including wind power, but objected to 76 wind farm proposals (onshore and off) between 2000-2004 and had raised concerns about a further 129 by late 2006. According to them: "Wind farms must be located away from narrow bird migration routes and important feeding, breeding and roosting areas. They must not be permitted where they would have adverse impacts on nationally and internationally protected wildlife sites."

In some quarters, the RSPB is regarded as more foe than friend[26] [27]. In Spain, where many griffon

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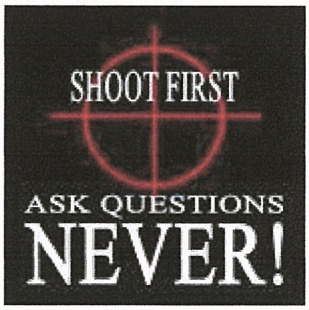
[25] www.wind-watch.org/video-allegheny.php

[26] www.iberica2000.org/ES/Articulo.asp?Id=3583

vultures are killed by swirling blades, loud cries of creative accounting come up[28]. If you're wondering what a big vulture looks like as it gets whacked by a 150 mph blade, have a gruesome look-see at this video[29]. White-tailed eagles in Norway receive the same brand of cutting-edge technology[30].

Note that the concerned operator of that Norwegian eagle graveyard "is doing everything it can to find a solution to the problem." Did anyone tell them that the birds are mostly dead? Problem solved! Big Wind calls that "mitigation", an operating strategy best described as "Shoot first, ask questions later." Norwegian naturalists are none too happy about IWTs killing their magnificent coastal eagles[31]. The Norwegian white-tailed eagle population is the largest in Europe: Of the 4,500 pairs that nest in the Nordic Countries, 3,500 are found in Norway. From the looks of the video – and the familiar images transcend the foreign language -- the whole coastline is going to be turned into one long killing field. Eagles, one of the most vulnerable victims of IWTs, have been whacked in locations around the world including Germany, Spain, Norway, Japan, USA, Sweden and Australia. The Down Under allusion to a black hole is fitting and applies to other locations globally[32].

ONTARIO: CUMULATIVE IMPACT IGNORED



Ontario uses a more ridiculous M.O.: "Shoot first, ask questions NEVER!" This appears to be a favourite around Queen's Park, especially with Smitherman and McGuinty -- whose sole repertoire in reply to valid citizen concerns about IWTs is "Shut up, NIMBYs! We don't want to hear it!"

As I've already pointed out, southwestern Ontario holds the greatest migration corridor in Canada and one of the finest on earth. But when wind energy companies go looking for blustery locations to dump their IWTs, that precious super-highway gets about as much respect as Rodney Dangerfield once did (i.e. *none*).

No suitable shoreline setbacks have been established to safeguard that world-class flyway. Adding to that grievous oversight, the effort put into pre-construction environmental screening reports is deplorable. Most are based on casual observations done over only a few days, without consideration

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[27] www.epaw.org/documents.php?lang=en&article=b0 EPAW, the European Platform Against Windfarms, consists of 375 signatory organizations from 20 countries

[28] www.iberica2000.org/ES/Articulo.asp?Id=1223

[29] www.wind-watch.org/video-vulture.php

[30] http://news.bbc.co.uk/1/hi/world/europe/5108666.stm

[31] http://www1.nrk.no/nett-tv/klipp/141497 (Click "Fullskjerm" above the screen for a much larger view.)

[32] www.smh.com.au/news/environment/green-power-black-hole/2008/01/02/1198949900016.html

for full seasonal movements, past use or variations due to severe weather conditions. In the majority of cases, local expert knowledge has not been sought, there has been inadequate use of existing scientific and historical information, and no standardized approach to the assessment process has been followed.

As a general rule, negative impacts are glossed over and minimized. Absolutely no thought is given to cumulative impact. That serious omission leads to the ongoing nickel-and-diming of the province's natural heritage. This is more than vexing, it's outrageous, especially when hundreds/thousands of IWTs may be strung in parallel lines, onshore and offshore, running almost continuously for hundreds of kilometres along the Great Lakes. A double gauntlet, coming and going!

IWTs impact local and migrant wildlife – birds, bats, monarch butterflies, dragonflies, amphibians, reptiles, fish and other creatures – on at least four fronts:

1) Instant death or prolonged fatal injury from a run-in with a moving turbine blade, tower or associated infrastructure such as transmission lines. Tower lights may add to the toll by attracting and/or confusing exhausted migrants at night or during the day under foggy conditions, onshore or offshore.

2) Displacement from the area around the turbines due to significant disturbance. Local breeders/spawners may abandon the site entirely. Disturbance can be caused by the turbines themselves (spinning blades and ensuing flicker and low-frequency noise/vibration into the air, ground or water) or from the intrusive vehicles/motorboats/helicopters and staff used in routine maintenance operations. Initial construction activity may cause local wildlife to abandon the site permanently.

3) Obstacles to seasonal and daily movements to and from resting, feeding, breeding/spawning, wintering and moulting areas. Some migrants may give the entire IWT array a wide berth thus increasing their energy expenditures and potentially reducing their fat stores and lifespan. The cumulative effects from hundreds or thousands of kilometres of almost continuous IWT arrays are major threats to all species, both onshore and offshore.

4) Habitat loss or detrimental change due to IWTs and associated roads, electrical substations and transmission lines.

5) Offshore, invasive species like zebra mussels and goby will increase due to lakebed disturbances and habitat changes. Underwater power cables running from IWTs to transmission lines onshore will emit strong electromagnetic fields which interfere with the behaviour and movements of sensitive fish species. Low frequency noise/vibration – which travels farther and faster in water – will negatively impact all aquatic life. Lake currents may be disrupted causing sedimentation over spawning areas and changes in temperature gradients. Commercial and sport fishing – major economic activities in the lower Great Lakes – could suffer large losses. Oil spills may also occur during construction and maintenance operations, as already documented[33]. Who's ultimately responsible? Apparently no one is.

[33] www.wind-watch.org/news/2009/01/09/debate-bubbles-over-oil-spill-firm-denies-role-in-incident-last-fall/

This spells long-term trouble – especially when you compile all the separate impacts caused by individual onshore and offshore IWT projects into one very large, unmanageable **cumulative impact**. That's what biologists on both sides of the border are stewing about: No one in government is taking responsibility and looking at the big picture. And there's a good reason why they aren't: It's frightening. *Very frightening*. Not only in terms of harm to wildlife, but in the transformation of much of the rural and natural landscapes of the continent into industrialized energy outposts with deforested ridgetops, disturbed lakebeds, divided rural communities and kilometre after kilometre of giant, out-of-sync swirling blades and intrusive transmission lines.

Protection at the End of the Funnel? Are You Kidding?

The situation around top-tier Point Pelee National Park has already been discussed. If a quickie environmental screening report is ever done for the offshore block where those 500,000 butterflies fluttered by, I can assure you that the monarchs would be given almost no notice whatsoever (that's if the person they hire to do the work is even versed on the subject). Nope, a few days shuffling around the East Beach and some minor sampling work offshore would likely be all that's required to get the coveted government rubber stamp of approval. Bingo!

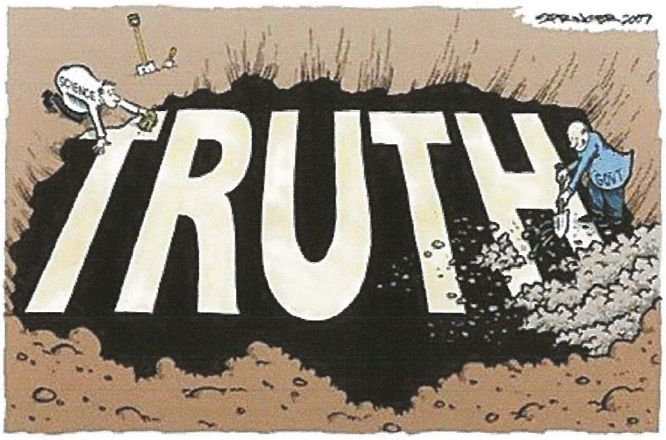
Some of you may think I'm kidding. I wish I was.

When the County of Essex, which includes Point Pelee National Park, tried to establish a five-kilometre-wide "no development" zone around its shorelines in 2008 as part of its Renewable Energy Policies, that recommendation – which was supported by local wildlife experts – was shouted down by wind industry lobby groups, including short-sighted/cash-strapped farmers who were hungry for lease money. That five-kilometre-wide safety corridor would have included the most heavily populated waterfront areas as well as the main flyway for migrants, which normally concentrate along the shorelines in season. So what was the final compromise? A pathetic setback of 200 metres from the shorelines. This is especially aggravating because the U.S. Fish and Wildlife Service in Ohio (across the lake) had already recommended a three-mile development setback for their shorelines.

Respected New York ornithologist Bill Evans recently upped that to five miles: "...the biggest concern involves the pressure to place turbines in close proximity to the shores of Lakes Erie and Ontario. These shorelines have a good wind resource, but the closer wind turbines are to the lakeshore, the greater the bird mortality will likely be. Many species fly around large bodies of water, and their flights tend to be concentrated in the vicinity of the lakeshore. Ideally, we wouldn't site wind projects within five miles of the Great Lakes.[34]". And we got 200 metres! An exception was eventually made for the

[34] http://blog.syracuse.com/outdoors/2009/11/wind_turbine_placement_should.html

onshore area around Point Pelee National Park, Hillman Marsh and Lake St. Clair but nowhere else in Essex County outside of the residential zones.



And then things went from bad to worse: After the provincial government rammed through its repressive Green Energy Act in 2009 – which stripped municipalities of authority over local wind energy matters – the policy work in Essex County and elsewhere was deemed null and void. With the exception of a paltry, inadequate 550-metre setback for rural residences, it's now open season everywhere in the province right up to the boundaries of national and provincial parks and other designated natural areas. Setbacks? Not under this totalitarian regime. Opposition is simply brushed aside with the arrogant retort of "NIMBY!".

Manly Miner – who first documented big hawk numbers in Essex County in 1931 – reliably observed: "I have seen as many hawks [50,000] in a whole day but never before such numbers in less than an hour as this occasion. It was between eight and nine o'clock in the morning and I conclude that the birds probably congregated for the previous night in some near-by woods and were starting out together on their day's travel." Woodlots are extremely important for all roosting migrants including birds, bats and monarch butterflies and should be adequately protected. Some of the biologists that Big Wind paid-off as hired guns to contest 200-metre woodlot setbacks in Essex County knew that broadwings climb so high on thermals during the day that they look more like blackflies than birds – and thus should stay clear of turbine blades. But those Benedict Arnolds don't seem to know one simple law of physics: what goes up, must come down (to roost). My field notes for the big flight of 1986 include the following observations: "To 6:45pm 1000+ in last hour. Flapping heavily now thermals declining. Dropping into trees to roost saw one Broadwing come back in reverse direction and perch in poplar along lake shore (6:50 pm)". My observations, like Miner's, are detailed local knowledge gained slowly and methodically over time.

Although Big Wind routinely minimizes its avian fieldwork, they usually pay no attention whatsoever to dragonflies and ladybugs. Both of those little critters migrate by the millions and will also be impacted by spinning blades. Who cares about them? Farmers should, for one: Ladybugs eat gazillions of mites and aphids that prey on valuable crops, thus giving them great economic status. Dragonflies clean up on mosquitoes which carry West Nile virus. They're also a major food source for birds and other predators. Another biological dynamo around the Great Lakes are massed mayflies. Those incredible, swarming insects are impacted in the nymph stage by offshore IWTs vibrating the lakebed with low frequency noise, as well as in the flying adult stage when they emerge in clouds of millions and hit spinning blades. Birds and bats alike gorge on those mayfly eruptions – as do schools of fish which, in turn, feed the vital industries of sport and commercial fishing.

For more on mayflies, see references [35] [36].

[35] www.ojibway.ca/mayflies.htm

The late Earl Godfrey, esteemed author of The Birds of Canada, opened his classic tome with the same economic pitch: "There is no way of estimating in dollars and cents the total value of our bird life, but we do know that it is immense. Vast numbers of birds wage continuous warfare on the insect hordes that strive to devour our crops, devastate our forests, and annoy us generally. Others destroy countless tonnes of weed seeds annually. Hawks during the day and owls by night maintain a round-the-clock check on the numbers of rodent pests. Gulls and other birds perform a useful service as scavengers." If windies understand one thing, it's dollar and cents – as long as it goes into *their* pockets.

Bird Kills: Lies, Damned Lies and Big Wind Statistics

Let's broach another controversial subject: The number of birds killed by turbines. Before getting into the gory details, I'd like to ask a simple question: If a table full of currency was laid out before you – and that offering ranged from pennies, to hundred dollar bills to gold bullion coins to heavy gold ingots – which would you grab first? If you said the ingots, you're a smart cookie. They're extremely valuable. Birds are like that, too: the overly-abundant red-winged blackbird is the penny of the avian world because its continental population exceeds 200 million. Golden eagles – less than 80,000 in number across North America – are a big handful of gold coins. The hefty, 400 troy ounce ingots? Whooping cranes and other precious rarities. All birds are not created equal and do not hold the same value. Bird kill numbers are meaningless without value rankings attached to them.

Critics of the wind energy industry know full well that the most vulnerable birds are also the most valuable: Eagles, hawks, waterfowl including swans, cranes, herons, egrets and other large-bodied birds which have a tough time changing course at the last moment[37]. Those "big bird" species are the Fort Knox of the avian world. And, unfortunately, there are far too many sliced-and-diced examples from all parts of the globe to demonstrate how those birds are faring against IWTs. Because local breeding populations are especially hard hit, nesting bald eagles around the Great Lakes are in considerable danger; DDT got them the first time around and IWTs will be next[38].

[36] www.dispatch.com/live/content/science/stories/2009/07/05/sci_mayfly.ART_ART_07-05-09_G3_RIEBRV5.html

[37] www.msnbc.msn.com/id/23389384

[38] www.on.ec.gc.ca/wildlife/factsheets/fs_bald-eagle-e.html (click on pdf for easier reading)

Now that you know something about bird valuation, let's get back to those IWT kill numbers. As a wise man once said: "There are lies, damned lies and then there are statistics." Continuing on in that vein, we have Big Wind statistics. In any discussion about IWT bird kills with windies, the first thing out of their mouths is the fact that millions of birds die from collisions with communication towers, cat claws, house windows, vehicles, power lines and lit-up office towers. No one is disputing that sad fact. Millions of birds do indeed die that way. But how many of them are eagles, hawks, swans or cranes? I might be extraordinarily lucky, but I haven't had a single golden eagle bounce off my windshield or house window yet. Ditto for red-tailed hawks, great blue herons, egrets or tundra swans. It's the big birds with small populations and low reproductive rates, as well as rare small birds, that biologists are concerned about. As you can guess, the bird kill numbers provided by Big Wind are questionable at best – if they reveal them at all. (And I've heard rumours that kills are routinely cleaned up before casual observers see them.)

The windies usually trumpet a nose-stretching annual average of two birds killed per turbine. EPAW's Bellamy and Duchamp, in the opposing camp[39] [40], cite 25 birds per turbine and project an eye-opening *annual* worldwide toll of 250 million dead birds in the future. And let's not forget about bat, butterfly and beneficial insect kills. Here, in Canada, Toronto Hydro likes to trot out "two birds killed per year" based on research at the showboat CNE Industrial Wind Turbine. There are three problems with that well-worn example: the first is that the turbine's operating capacity was a measly 14.7% (i.e. virtually stark still and dropping to an even-worse, five-year average of about 12% now); the second is that faulty methodology may have been used, as indicated by Toronto's bird-tracking FLAP[41] (Fatal Light Awareness Program); and third, it is a ***single*** tower and does not reflect the cumulative impact of a continuous line of IWT arrays onshore and off. Also keep in mind the congressional hearing testimony from Dr. Fry about "poofed" birds and others catapulted a greater distance than expected. The science of counting small dead birds is not an exact one. And to be quite honest, it isn't the be-all and end-all of IWT impacts anyway.

What's ignored in the mad rush to the bird kill numbers is the energetic costs of displacement and disturbance to huge flocks of migrants. Dodging around individual IWTs or bypassing entire arrays of them on a flyway thousands of kilometres long burns up valuable fat stores and reduces overall fitness. That energy hit may be enough to push migrants to an early death along migration routes or on wintering and nesting grounds. On top of that, turbines may prevent birds and other migrants from using traditional staging areas to rest and feed – forcing them to continue flying on, in poorer condition, to marginal habitats. The cumulative behavioural battering from IWTs, if not fatal, will certainly raise stress hormone levels in migrants and most likely reduce their longevity. Bird kill stats from around tower bases reveal only a fraction of the whole impact picture.

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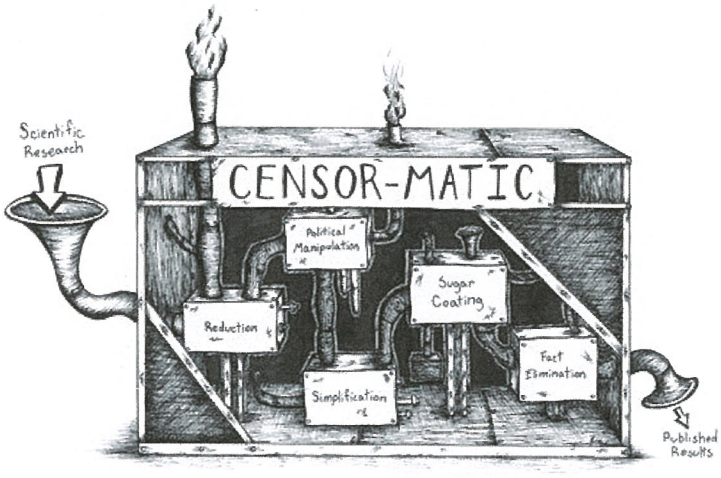
[39] www.epaw.org/documents.php?lang=en&article=b0

[40] www.iberica2000.org/ES/Articulo.asp?Id=1875

[41] www.flap.org/new/wind_turbine.htm

My concern about IWT arrays, or "wind factories", was heightened considerably after looking at the environmental screening report for the Erie Shores Wind Farm near Port Burwell on Lake Erie. A stone's throw away is another Canadian birding mecca on par with Point Pelee National Park: the fabled Long Point with its pioneering bird observatory, spring and fall warbler migrations, International Monarch Butterfly Reserve and huge seasonal swan and waterfowl gatherings – not to mention its beautiful lakeshore scenery and pleasant camping (which Pelee doesn't offer)[42].

One would assume, then, that a great deal of fieldwork would be done and that local experts would be consulted to ensure that this naturalist mecca was not threatened. After all, Bird Studies Canada[43], the finest avian research organization in the whole country, and Long Point Waterfowl[44], an equally superb wetlands and waterfowl research group, are located right down the road from Erie Shores. Was their expertise tapped? Not to my knowledge.



The principal investigator, the same distinguished ornithologist who did the CNE wind turbine study, went out over only three days in the fall to have a quick look at the migration activity: "About 400 Blue Jays were tallied, mainly in early October, about half of which could have been at turbine blade heights. Larger numbers probably passed by earlier in September." Indeed, larger numbers probably did. As you might recall, I mentioned a late-September *single day count* of **264,410 blue jays** at Holiday Beach further south. Blue jays zoom along the Lake Erie shore in phenomenal numbers. Was that in the screening report? Or the fact that the north shore of Erie is one of the most significant flyways on the planet? Nope, not a word.

Divide that 260,000-plus birds in half – the estimated half observed flying at blade height – and you have a fair chunk of ruffled feathers in your hand. Would a post-construction follow-up reveal anything about the energetic costs those blue jays are now paying to fly around the IWTs? The screening reports are snapshots, not serious studies. As Mark Twain once quipped: "Get your facts first, then you can distort them as you please." By the way, no mention was made of bats at all. If I recall correctly, flying butterflies/insects didn't rate a word either. That's the difference between a rubber-stamped quickie and a detailed, full-blown environmental assessment report (which the provincial government refuses to institute as a part of its Big Wind application procedure).

The famous Long Point swans, which fan out from the lake to feed in the surrounding cornfields of the region, didn't fare much better. And those vociferous, gleaming swans – which hundreds, if not thousands, of birdwatchers come to see each spring – are worth big tourism dollars. For many

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[42] www.on.ec.gc.ca/wildlife/nwa/eng/longpoint/longpoint_htm-e.html

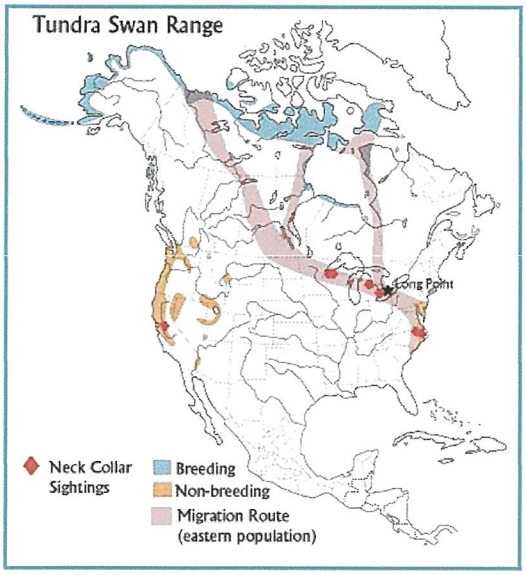
[43] www.bsc-eoc.org

[44] www.bsc-eoc.org/lpw.html

naturalists in southern Ontario, it is a sacred rite of spring to greet those white-feathered friends and hear their raucous *"Wow-how-Wow"* calls again. For that reason, Long Point has traditionally been known as the Swan-Watching Capital of Ontario[45] (in fact, all of Canada).

This is no idle boast: virtually the entire eastern population of tundra swans flies into, or over, this area each spring from the Atlantic seaboard. Of all the places in southwestern Ontario to see these majestic birds – and being a swan aficionado, I've visited most of the hotspots – Long Point remains my favourite. If you're looking for *the* place to experience noisy gatherings of thousands of magnificent swans, Long Point is almost a sure thing.

It should come as no surprise that swan research is a priority at Long Point[46]. Once it became apparent that an in-depth, full environmental assessment report was not to be forthcoming – remember, the bully-boy Ontario government has not elevated *one single project* for a thorough assessment – Bird Studies Canada biologists, led by Long Point Waterfowl executive director Dr. Scott Petrie, were forced into the fray. They worried not only about direct hits by turbine blades[47] but also about complete or partial displacement of the swans from their traditional staging areas. Coincidentally, only three months before, Dr. Colin Pennycuick of the University of Bristol in the U.K. had presented a paper entitled "*Wind Farms As Obstacles to Migrating Birds*" at a British Ornithological Union conference focussing on renewable energy. His birds of concern? Whooper swans, European cousins of the tundra swans that visit Long Point. In his paper, Pennycuick emphasized that large-bodied birds like swans have difficulty navigating around obstructions and at times of low cloud cover would be in grave danger of being chopped by IWTs. The solution? Keep the 400-foot-high killer obstacles out of their flight path[48].



So, at the 11th hour, Long Point waterfowl expert Dr. Petrie was obliged to enter the ring against Big Wind's hired gun, Dr. Ross James, former ornithological head at the Royal Ontario Museum. It was no contest, however. The match was over before the end of the first round: After receiving Petrie's solid left-right combination – an accurate appraisal of AIM Powergen's environmental screening report as being vague and inadequate – a flustered Dr. James admitted: "My studies were general, I had to consider everything. I couldn't concentrate on just one species." End of bout! It was a T.K.O. with

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[45] www.norfolktourism.ca/images/stories/swans_article.pdf

[46] www.bsc-eoc.org/research/lpwwrf/index.jsp?lang=EN&targetpg=lpwwrfTUSWtrack

[47] www.windaction.org/news/4950

[48] www.bou.org.uk/WFW%20abstracts.pdf

minor concessions being made on where the worst turbines could be relocated. (Full account in the July 13, 2005 Simcoe Reformer: *Biologists Tilting at windmills Wind Farm Seen As Threat to Tundra Swans.*)

But, and this is the galling part, using the recommended setback guidelines from the U.S., *none* of the turbines would have ever been allowed anywhere near the shoreline feeding areas. In Ontario? The more the merrier! Tourism and tundra swans? Who cares! Full environmental assessment reports? Bah humbug! Damned the torpedoes – or full environmental assessments – and full speed ahead. It boggles the mind that the local experts were not even consulted upfront. After all, Long Point is one of the greatest areas for migrating songbirds, waterfowl, dragonflies and monarch butterflies on the entire continent. Yet it was treated with as much respect as a weedy vacant lot down the street.

The undisputed waterfowl champ, Dr. Scott Petrie, might have felt somewhat relieved but he knew things would only get worse: the most important waterfowl migration corridor in the Canadian lower Great Lakes lay between Long Point and the Detroit River. And Big Wind was seeing dollars signs over the entire region. The Canadian Wildlife Service has long rated the shallow waters of Lake St. Clair as the greatest waterfowl staging area in Ontario outside of James Bay. Long Point is a close second. And there is much flying between the two areas, especially when it comes to swans.

The Detroit River itself is no pushover, either: in fall, more than 300,000 diving ducks stop to rest and feed on beds of wild celery in its lower reaches within the Detroit River International Wildlife Refuge, the only international refuge in North America. The coastal marshes of the Detroit River and adjoining western Lake Erie host the highest concentration of staging American black ducks on the continent -- more than 50,000 some years[49]. Tens of thousands of shorebirds are common in summer. IWTs will be obstacles the entire way, with minimal concessions given around the St. Clair National Wildlife Area, another of Ontario's biological treasures[50].

Having watched swans around St. Clair NWA for a number of years myself, I know the birds feed in cornfields by the thousands west of Pain Court, then fly off at dusk to rest on the lake. Many, however, also feed in the shallow lake and fly back and forth during the day. That means trouble, especially in the low light conditions arising later on in the day. Again, IWTs should *never* have been allowed anywhere around that National Wildlife Area.

Offshore, the situation is just as onerous. In spring and fall, hundreds of thousands of waterbirds migrate along and across the north shores of Lake Erie and Lake Ontario and will be exposed to IWT arrays in the water as well as on land. Birds may be displaced from their traditional migration routes and feeding and resting areas. Diving ducks and seaducks regularly rest or loaf up to 10 kilometres offshore – within areas where IWT arrays are now proposed. Major migratory corridors will be negatively impacted.

As for the millions of colourful songbirds that fly over the lakes in spring, they'll have major obstacles to

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[49] www.fws.gov/refuges/profiles/WildHabitat.cfm?ID=31521

[50] www.on.ec.gc.ca/wildlife/nwa/eng/stclair/stclair_htm-e.html

overcome in the form of 400-foot-high double gauntlets. Most flapping birds cross Lake Erie or Lake Ontario from the south at night, arriving on our shores close to dawn in an utterly exhausted condition, barely able to fly and often shivering from the ordeal. Trees, bushes and beaches near the shorelines may be covered with these poor creatures. And what will they be forced to negotiate on the way in? Offshore IWTs, right where they lose altitude to land. More IWTs await them as giant obstacles onshore. In poor conditions, when sudden storms and low cloud cover or fog converge at night, the outcome could be horrendous. Point Pelee is definitely a concern but the lines of IWTs – onshore and off – will extend up and down the entire north shore of Erie.

On Lake Ontario, the highest ranked area for wind energy development lies right off Prince Edward County, which contains Prince Edward Point National Wildlife Area[51]. Located on Long Point Peninsula (the second one in the province), this wildlife refuge attracts many migrants including songbirds, hawks, owls, waterfowl, bats and monarch butterflies. In regards to those butterflies, Prince Edward Point NWA has the rare privilege of joining Point Pelee National Park and Long Point NWA as one of the only International Monarch Butterfly Reserves in all of Canada. A local bird observatory proclaims its importance and standing on the feathery front[52]. How many songbirds can drop in here? On May 31, 1997, after a heavy deluge of rain grounded migrants flying in over the lake, an estimated one million birds sought refuge on five kilometres of the peninsula. Impressive! Offshore, the National Wildlife Area harbours waterfowl of all kinds; as a wintering area, it regularly attracts tens of thousands of ducks such as oldsquaw and greater scaup. Big Wind is itching to disrupt the place with onshore and offshore IWTs.

Has anyone in the Ontario government heard of due diligence and the precautionary principle where



prudent avoidance is applied? Apparently not!

Just how little due diligence is used in the IWT slap-bang-finish process becomes quite clear after looking at the recent, outrageous CFB Trenton example[53]. The greedy windies are in such a big rush to get their hands on more green energy (read *cash*) they don't even pay attention to where our military bases and defence aircraft are located. Should we be surprised? Even worse, the local provincial political rep has the nerve to back those bunglers up: "The developer must try and mitigate these concerns. If not, then there is a mechanism they [Department of National Defence] can use to appeal." I have a better mechanism in mind: a DND bombing run directly over Queen's Park in Toronto. Heck, why can't two play the "Shoot first, ask questions NEVER!" game?

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[51] www.on.ec.gc.ca/wildlife/nwa/eng/prince/princeedwardpoint_htm-e.html

[52] www.pec.on.ca/other/birds.html

[53] http://wellingtontimes.ca/?p=520 and www.cfbtrenton.com

Funny enough – and if the political shenanigans involved with IWTs weren't so shocking it would be almost comical -- the industrial nightmare arising from the Green Energy Act-Big Wind collusion holds many parallels to the story of the Emperor's New Clothes[54].

Hmmmm...S**wind**lers, false claims, wasted taxpayer dollars, idiotic politicians and a gullible public. Sound familiar? Maybe it's time you gathered the courage to make the same observation as the little child in that story. Our continent's wildlife heritage and rural/natural landscapes depend on it.

And so do **hundreds of thousands of jobs**. According to *Birding in the United States: A Demographic and Economic Analysis*, 48 million American birders inject $36 billion directly into retail sales each year but the overall kick to the U.S. economy is an astounding $82 billion -- which translates into **671,000 jobs**. A tidy sum of $10.5 billion in state and federal income taxes is collected from birdwatchers annually. We won't even add in the economic benefits arising from general nature studies, outdoor recreation or wildlife-watching which could be compromised[55]. Canadians -- who spent an equally-impressive $7.2 billion on outdoor activies in natural areas in 1996 -- follow the same general, dollar-pumping pattern; $2.9 billion of that Canadian total was dropped into Ontario alone**.** In addition to the **215,000 jobs** created or maintained across Canada as a result of that nature-related activity, $5.4 billion went into government revenues from associated taxes[56].

That all adds up to IMMENSE economic benefits, including close to one million jobs continent-wide. So the next time some fool in Big Wind or government starts shouting you down with the brainless slur of "NIMBY", kindly inform that ignoramus of the *real* economic consequences of their "green energy" folly.

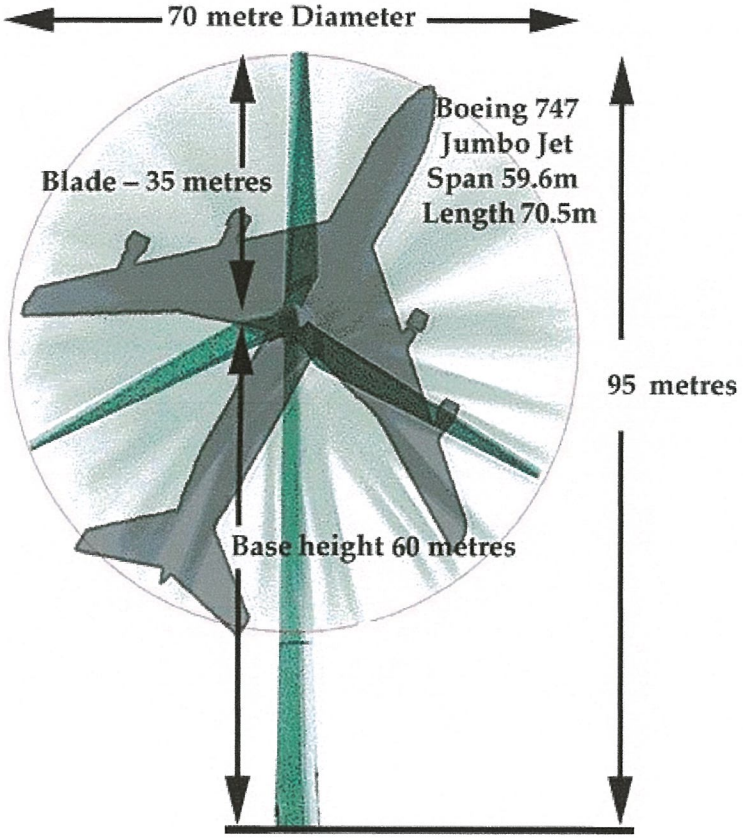
Wayne Wegner, THE WILDLIFE WIZARD

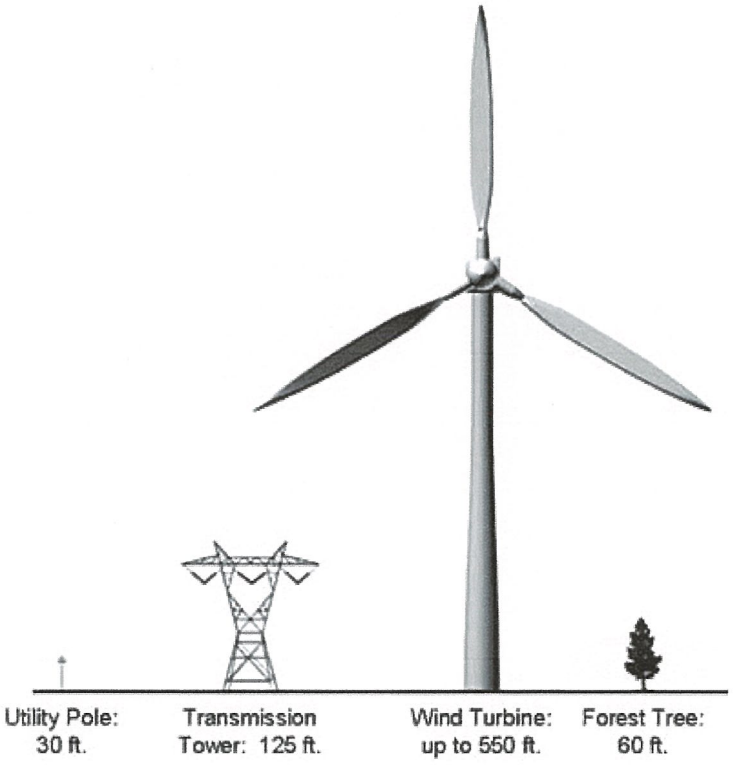
December 1, 2009

[54] www.andersen.sdu.dk/vaerk/hersholt/TheEmperorsNewClothes_e.html

[55] http://library.fws.gov/Pubs/birding_natsurvey06.pdf

[56] www.ec.gc.ca/nature/index_e.htm click on *The Economic Significance of Nature-Related Activities (PDF format)*


70 metre Diameter
Boeing 747
Jumbo Jet
Span 59.6m
Length 70.5m
Blade – 35 metres
95 metres
Base height 60 metres


Utility Pole:
30 ft.
Transmission
Tower: 125 ft.
Wind Turbine:
up to 550 ft.
Forest Tree:
60 ft.

CONCLUSION
The Shipwreck of Ontario's Environmental Policy
In summary:

Ontario's fascination with wind turbine (and solar) proliferation does nothing to augment job creation, provide a cleaner, safer environment, enhance the economy, but DOES and HAS created havoc on all of these levels, for humans, wildlife and the economy. Indeed the embracing of wind turbine technology with hope that it would represent a clean, environmentally sound, and safe energy augmentation, has been proven to be a huge mistake.

Many countries have now examined, or are in the process of examining, much larger setbacks, almost overwhelming negative impacts to economic development, and human health impacts, with varying degrees of applying remediation. North America falls sadly behind the understanding of many of these impacts, or ignores them, and continues to plunder its best resources and historic environmental values: Ontario seems to be a leader in this blind folly. Ontario is recognized at times, sadly, as an ignoble example of lack of legal and democratic process, and as having a blind adherence to policies that are incredibly harmful on all levels.

and of course, impacts to wildlife, birds and bats that may not be remedied possibly for many hundreds of years.

This intellectual failure, political failure, requires an immediate intervention.

We call on the ECO to implement immediate investigations. Due to the obvious breaches of environmental values outlined in the EBR and Ministry SEVs, there needs to be a thorough examination of the studies that have already clearly defined the failures, and additional open and independent study into the far reaching failures and breaches of law and common sense, project by project.

Until the environment can be adequately protected, which obviously includes human health, there needs to be a moratorium on pending and planned projects. There also needs to be immediate remediation for people and wildlife habitats that are currently in harm's way.

Thank you sincerely for this opportunity to meet with you.