

Presentation for Kingsville Public Meeting

OPENING REMARKS

Mr. Mayor and guests

Thank you for this opportunity to speak.

I am speaking on behalf not only of Citizens Against Lake Erie Wind Turbines and members of the audience who are concerned about Point Pelee National Park, Lake Erie Fisheries, the Jack Minor Sanctuary and the Towns of Leamington and Kingsville but also all citizens of Ontario who are concerned about wind farms.

I am a professional engineer and have a PhD in engineering – and I am the son of an engineer who had a long career with Ontario Hydro. I have a strong interest in energy-related matters – particularly in the supply and cost of electricity.

I have examined the subject of wind energy in some detail and have come to the conclusion that wind farms have a place in Ontario's power make-up but, as Dr. David Suzuki has indicated, they must be placed where their negative features have minimal impact on people, wild life and environmentally sensitive areas.

EUROPEAN EXPERIENCE/NEGATIVE EFFECTS OF WIND POWER ON THE NETWORK

I am calling this presentation **WHAT THE PRESENT AND PREVIOUS GOVERNMENTS AND THE PROPONENTS OF WIND POWER DON'T WANT YOU TO KNOW ABOUT WIND POWER**

I strongly believe that the population, be they local farmers or city dwellers, will make the best decision for their interests when they know the facts. Here are the facts that are slowly being revealed around the world.

1. Wind power is so erratic that the uptake of energy from wind turbines by the Ontario power grid is not possible much of the time.
2. Erratic fluctuations in the wind mean that the wind power fed into an existing grid surges up and down so erratically – destabilising the power distribution network such that existing power sources – namely fossil fuel sources – must be turned up and down rapidly to maintain stability.
3. The result is rapid voltage fluctuations and poor network synchronisation – leading to brown outs, voltage surges and loss of network timing required for everything from clocks to computers.
4. With any significant quantity of wind-generated power fed into the network neither OPG nor Hydro One can maintain Network Stability. This applies 365 days of the year.
5. This is now the experience with wind power the world over.
6. Just how extensive this experience is and how much wind energy the power grid can support I will tell you in a moment.
7. Another problem with wind energy is that when there is no wind or the wind is too weak – that is, 11 kph or less – to turn the turbine there is no power. The optimum output of a wind turbine occurs at a very high wind speed of 49 kph.
8. When does the wind not blow? By definition on smog days and many other days of the year such as during the winter “doldrums”. There were 42 smog days last year.
9. We now have smog days simultaneously over an area from North Bay to Lakes Ontario and Erie – an area in which 80 to 90 per cent of wind turbine sites are proposed. (i.e. 80%-90% of wind

turbines will be non-operational simultaneously.)

10. The result of these problems – that is, rapid fluctuation in the wind which destabilises the network and too little or no wind for many weeks of the year – means that OPG must keep all the coal-, oil- and gas-fired plants operating at about 60% capacity 100% of the time to stabilise the network and offset fluctuations.

Nuclear power plants require up to one week to increase or decrease the power output and thus are not suitable. Hydro generation of electricity is the cheapest (at about two cents per kWh versus wind at 11 cents per kWh), the greenest source of energy and, thus, is not suitable either. That is, one would use hydro power in the first place where available.

11. That is the experience in Europe and elsewhere.
 12. It is a monstrous myth that wind-generated energy will allow OPG to shut down fossil-fuel-fired generating stations.
 13. Additional energy from land-based and shore-based wind turbines has not led to the closure of one fossil-fuelled generating station anywhere in the world!
 14. It is also a myth that 10 per cent of Ontario's energy will be provided by wind by 2010 or 20 per cent by 2020. At a threshold of 3 to 5 per cent wind energy more plants powered by fossil fuel must be built to stabilise the network. That is the European experience.
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DOES THE PRODUCTION OF WIND ENERGY REDUCE EMISSIONS OF CARBON DIOXIDE?

The use of wind to generate electricity does not produce CO₂ – in that respect wind energy is clean and “green”. However, as I have explained above, to offset wind fluctuations and balance the power supply on the network it is necessary to continue operating fossil-fuelled plants at 60 per cent capacity, cranking them up and down as required – and under those conditions those plants produce more CO₂ per kWh than they do when they are running at 100 per cent capacity.

CONCLUSIONS

1. Wind energy is **ONLY VERY MARGINALLY GREEN ENERGY** – that is, that portion of the energy from wind energy factories with which the fossil-fuel, nuclear and hydro-generation plants can be synchronised without losing network balance – about 3 to 5 per cent of total energy generated for OPG by wind factories – will be truly green energy.
 2. No amount of wind energy will enable the shutdown of any existing power generating station in Ontario.
 3. Despite the small amount of wind energy that the network can use, the public is being forced to pay a huge price in the form of capital grants for the installation of wind energy factories. Note that I use the term “**wind energy factories**” rather than “**wind farms**” – a euphemism which belies the negative environmental effects of such enormous industrial installations. They are zoned industrial and are larger and noisier than many factories. They cause more pollution to be generated so that they can exist.
 4. The public is also forced to pay heavily for this dubious source of energy through huge **power rate increases** – 11 cents per kWh compared to 6.3 cents per kWh. In other words, the public is forced to **subsidise** wind factories to make them profitable for developers.
 5. There will be huge maintenance costs born by OPG – and hence the public – resulting from the need to crank fossil-fuelled power plants up and down that were never designed for that type of operation.
 6. Depending on the contracts they have with the Province, wind factory operators may be paid when the energy they generate is not used – or they may not be paid for it – **more subsidisation with public money!** That is the European experience. Wind energy factories can only be used for 10 to 25 per cent of their theoretical capacity and supply about 3 to 5 per cent of the energy needed on the grid.
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WHERE DOES THIS INFORMATION COME FROM?

Sources include but are not limited to the following:

Please note the dates that I mention

1. Renewable Energy Foundation. “German Expert Warns of Wind Energy’s Economic Downside”. 8 December 2005 Press Release. Accessed at http://www.ref.org.uk/images/pdfs/Press_release08.12.05.pdf
2. White, David J. “Danish Wind: Too Good to be True?” *The Utilities Journal* (July 2004): 37-39 Accessed at: http://www.viewsofscotland.org/library/docs/Too_Good_to_be_True_Jul_04.pdf

3. The German Academic Initiative Group. "The Darmstadt Manifesto". 1 September 1998 Press Release. Available at numerous sites on web. Can be accessed as attachment to "Policy Comments on Point Petre Commercial Wind Turbine Generating Plant" available from the Archives and Collections Society in Picton, Ontario at http://www.aandc.org/research/wind_pec_present.html
4. Rosenbloom, Eric. "A Problem With Wind Power". 5 September 2006. Available at the web site of Industrial Wind Energy Opposition, a U.S. group, at www.aweo.org. Paper is at <http://www.aweo.org/ProblemWithWind.html>
5. Letters to Physics Today. "Tough Questions About Wind Energy". Physics Today (August 2006):11. Available at <http://www.physicstoday.org/vol-59/iss-8/p11b.html>
6. E.ON Netz GmbH, *Wind Report 2004*, English translation available at http://www.eon-netz.com/EONNETZ_eng.jsp
7. E.ON Netz GmbH, *Wind Report 2005*, English translation available at http://www.eon-netz.com/EONNETZ_eng.jsp
8. Renewable Energy Foundation. "REF Renewable Energy Foundation expresses concern at E.ON NETZ WIND REPORT 2004". 6 October 2004 Press Release. Accessed at http://www.ref.org.uk/images/pdfs/Press_release06.10.04.pdf

More than 30 other papers dating from 2002 to 2006 from around the world

IS THE SACRIFICE FOR WIND ENERGY GENERATED ON LAND OR NEAR SHORE WORTH IT?

Clearly the rest of the world is now awake to the “problem of wind power”. The answer is a resounding NO from the rest of the world.

SO WHAT IS THE REST OF THE WORLD DOING?

NORWAY	Studied the Danish experience and cancelled all wind energy factory plans
DENMARK	<p>Stopped all wind energy factory development on land or near shore</p> <p>Is exporting 84 per cent of its wind energy to neighbouring countries – below cost at great expense to the Danish taxpayers</p> <p>Only placing wind energy factories in the ocean at 8 to 40 km offshore where the wind is steady</p> <p>The government is buying up homes where the property value has gone to zero</p>
GERMANY	<p>With 12,000 wind turbines installed they are buying fossil-fuel generated power at spot market prices from neighbouring countries – resulting in a large permanent price increase to the German public and to German industry</p> <p>Every increase in electricity prices makes German industry less competitive with the world – resulting in job losses</p> <p>Over a 5-year period wind turbines were only able to provide 14.7 per cent of their electrical capacity to the grid, resulting in a huge expense to the taxpayers</p> <p>Most virgin countryside has been converted to wind energy factories which are zoned industrial</p> <p>NOTE: 12,000 wind turbines would extend from Vancouver Island to Newfoundland 2.5 times at one km spacing.</p> <p>In late 2004 Germany stopped all wind energy factory development on land and near shore and is now developing the factories 8 to 40 km offshore.</p> <p>The German energy agency stated in 2005 that further wind energy would increase consumers’ costs by a factor of 3.7 and that the reduction of greenhouse gas emissions could be achieved much more cheaply by installing filters and condensers on existing fossil-fuelled plants.</p>
SPAIN	<p>Began withdrawing subsidies for wind factories in 2002</p> <p>In 2006 ended by “emergency decree” all subsidies for wind factories</p> <p>When subsidies are cancelled most wind factories shut down as production of wind energy is not cost effective</p>

SWITZERLAND	Is also cutting subsidies. Why? Wind energy is too expensive for the benefit
NETHERLANDS	Decommissioned 90 turbines in 2004 Is now placing turbines 8 to 40 km offshore
JAPAN	Japanese Utilities have severely limited the wind power they will buy – effectively shutting down many wind energy factories
AUSTRALIA	Reduced the level of renewable energy the utilities must buy
IRELAND	Placed a moratorium on all new wind farm development
SCOTLAND AND WALES	Too many wind energy factories on hills and in dales Significant impact on revenue from the tourist industry Now rejecting 95 per cent of applications for land-based and shore-based wind energy factories Now 8 to 40 km off shore

NO EQUIVOCATION HERE

WHAT ARE WIND FARMS PROPONENTS AND OPPONENTS SAYING TO THIS?

- Elsam, the Danish power generator (including wind power) states that “increasing wind power does not decrease CO₂ emissions.
- Christopher Dutton, CEO of Green Mountain Power, a partner in the Searsburg wind farm in Vermont, has said that there is no way that wind power can replace traditional sources of energy.
- John Zimmerman of Enxco admitted in a meeting in Lowell Vt. That “Wind turbines do not make good neighbours”.

WIND ENERGY IS BARELY GREEN ENERGY

IN SUMMARY

Wind power is barely a source of green energy (3 to 5 per cent of network requirements) after which more CO₂ pollution than we have today will be produced to add further wind power to the network. Based on European experience, this translates crudely to 500 to 1250 wind turbines of 2MW capacity which can be accommodated without building more fossil-fuelled plants in Ontario. Since residents cannot count megawatts of energy flowing in power lines they can control excess wind turbine placement by ensuring the government does not exceed these limits.

POLITICAL DICTATORSHIP

WHY AM I SPEAKING OUT?

The Ontario government has taken three draconian steps to muzzle the public.

1. Bill 51

An Act to Amend the Planning Act and the Conservation of Land Act and to Make Related Amendments to Other Acts.

This is a huge document that has buried within it clauses that prevent municipalities from

placing in their Official Plans any regulations which would prohibit a wind energy factory within or near their communities.

2. A news release dated 19 June 2006 by Gord Miller, the Environmental Commissioner of Ontario states that the government followed up its announcement about how the province would meet its future electricity needs with two more decisions “that deprived the public of their rights to participate in decisions that could have great environmental significance for the people of Ontario”.

They passed a regulation that bypassed the *Environmental Assessment Act*, allowing future nuclear facilities to avoid the provincial environmental assessment process.

In addition, the Ontario government bypassed Ontario’s *Environmental Bill of Rights*. “They escaped the process whereby the people of Ontario should have been able to review and comment on the regulation to exempt the nuclear plans from an environmental assessment”.

3. The Ontario government has also effectively cancelled the Environmental Assessment process for wind energy factories in its implementation of an **environmental screening** process. From a leak within the government we have learned that the Ontario ministries do not accept or consider the comments and concerns of citizens. Instead, they reply to their letters by telling them to address all concerns to the proponent of the proposed wind farm development.

At the end of the environmental screening process, citizens have 30 days to determine whether their concerns have been addressed and, if not, to prepare a complaint to the Director of the Environmental Assessment and Approvals Branch. It will ultimately be decided by the courts, at the opponents’ expense, whether their original concerns have been addressed or not.

In other words, without a proven complaint by the public within 30 days of publication by the proponent of a notice of completion of environmental screening the requirement for a full environmental assessment is waived.

In practical terms this means, in our case, that responsibility for protection of a precious national resource such as Point Pelee National Park has been downloaded to ordinary citizens with all the costs entailed.

POLITICAL SUICIDE

In an article by April Lindgren for Canwest News Services which appeared in the Windsor Star on the 2nd of September, the Minister of Energy, Dwight Duncan is quoted as follows:

“We need proper processes, proper environmental processes and so on and they are in place.”

Is that not a misrepresentation of the actual process now imposed on the public? “Proper” from whose perspective?

Minister Duncan goes on to say, and I quote:

“But at the end of the day remember if we don’t get these things up and sited we are not going to have enough power.”

Is that not a hollow threat intended to scare the public? We can not be frightened by such a statement when we know that we can only draw 3 to 5 percent of our existing generating capacity from the wind before OPG has to build more fossil-fuel-fired generating stations to balance the network.

He goes on to say, and I quote again:

“These [wind turbines] produce greener power, cleaner power and we all have to do our bit.”

Again Minister Duncan is not telling the whole story but only the myth that sustains the promotion

of wind energy – a myth that thrives on ignorance of how the energy system must actually operate to utilise wind power.

QUESTIONS THE GOVERNMENT MUST ANSWER

WHY, WHY AND MORE WHY?

1. Why is the Ontario Liberal government inflicting on the population what the Conservative government started?
 2. Why persist with the myth that wind energy factories will leave us better off in terms of energy supply and reduction of CO₂ emissions?
 3. Perhaps they believe that if they repeat it often enough we will believe it – or perhaps they believe it themselves because they have repeated it so often. But WHY?
 4. Why is the Ontario Liberal government persisting with this sham when so many other countries are suspending subsidies for wind energy factories?
 5. I very much appreciate the presence of the media here today. There is much additional information required on the 20-year financial guarantees provided by the Ontario government to wind factory developers. This information can be obtained by the media by using the *Freedom of Information and Protection of Privacy Act* to determine what is really happening in our government. Specifically ask for access to the contracts between the government and the wind factory developer. They will reveal much.
 6. The information I have presented has been known at least since 2002 – some would say since the release of the Darmstadt Manifesto of 1998. No government, Liberal or Conservative, can claim ignorance of the information.
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THE KINGSVILLE LEAMINGTON SITUATION

SO, WHAT DO KINGSVILLE AND LEAMINGTON GET FOR THEIR 119 WIND TURBINES OR THE NEXT PROPOSAL BY SOUTHPOINT WIND POWER OR OTHER DEVELOPERS?

A battle may have been won here but the Minister of Natural Resources has offered to work with Southpoint Wind Power to find a more appropriate site for a project.

We will **not** get cheaper energy or **less** pollution.

WE GET

1. The destruction of the bird migration to Point Pelee National Park – one of the three most concentrated bird migratory paths in the world – a national and international treasure
2. A 30 to 40-million-dollar loss in tourism to this area
3. Destruction of millions of butterflies genetically programmed to fly through the Park
4. Destruction of thousands of bats which are critical for balancing the insect population – especially mosquitoes (carriers of West Nile virus).
5. Pollution of the Leamington, Kingsville and Lakeshore water source on which almost 70,000 people depend – because pile driving for the wind tower support structure breaks into oil and gas pockets or the sulphurous aquifer lying beneath most of Essex County and the western basin within the proposed depth of the pile – combining water from the sulphurous aquifer with Lake Erie water and the polluted Lake Erie water with the otherwise pure aquifer.

6. Another “Caledonia” may be in the making because Southpoint Wind Power has been advised by the MNR that they may proceed with the wind farm installation even though the Walpole Island First Nation claims rights to the water under a 1790 treaty.
 7. Noise pollution from 41-storey-high turbines (each larger than a 747 jumbo jet) with blade tip speeds of 340 kph. Sited at an unheard of density of 16 turbines per square kilometre the noise will blanket 15,000 homes in Kingsville and Leamington.
 8. A conservative estimate of the loss in property value (based on European experiences) is 1.875 billion dollars for the 15,000 homes affected. A reduction in the tax base of that magnitude will bankrupt Kingsville and Leamington.
 9. We have not been able to find a wind farm operator anywhere in the world who has dared to place a wind energy factory within one kilometre of 50,000 people.
 10. We get 24 to 59 turbines in an area equivalent to what the New York State Energy Research and Development Authority recommends for one to four turbines.
 11. Property devaluation means no new residents, making it impossible to hire doctors for LDMH to care for the sick and elderly in Kingsville and Leamington.
 12. The density of the turbines is such that they pose a significant safety hazard. In such a dense array, one wind turbine buffets the next causing destruction of the blades – pieces of which have been known to travel as far as 8 km.
 - In winter, ice is also thrown from the blades for distances up to 2 km.
 - Lightning strikes also cause damage to blades resulting in blade disintegration at a later date.
 - Heavy swarms of insects such as shad flies or June bugs cause blade imbalance and the necessity to shut down turbines to prevent blade disintegration.
 13. At an unprecedented density of 16 wind turbines per square kilometre the noise multiplier effect will be about 20 to 25 times. That level of noise will exacerbate the health effects already documented in UK and the USA where physicians and researchers have observed:
 - Increases in blood pressure and heart rates during sleep
 - Changes in breathing patterns and cardiac arrhythmia during sleep
 14. A single wind turbine will produce noise 100 times the level which the World Health Organisation states will cause sleep deprivation at a distance of approximately one km. Imagine the impact of 16 turbines per square km located approximately one km from shore.
 15. Other adverse health effects include: headaches and migraine, nausea and dizziness, tinnitus, stress and anxiety, depression, poor concentration, irritability and inability to cope, and learning disabilities in children.
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SUBSIDIES WILL END FOR MANY ONTARIO AND CANADIAN WIND FACTORIES

WHAT WILL BE THE IMPACT ON SOUTHPOINT WIND POWER (OR ANY OTHER INEFFICIENT WIND FARMS), THEIR STAFF AND FINANCIAL SUPPORTERS?

The company will declare bankruptcy. Why?

1. Only a very few operators who can operate at peak efficiency can be tolerated on the grid because of grid imbalance.
2. High density arrays of wind turbines (16 per square km in this case) are the least efficient because

placing the turbines so close together leads to wind shadowing and blade-to-blade turbulence.

3. The risks (adverse health effects and accidents) posed to more than 50,000 residents in the vicinity will mean astronomical insurance costs for the company.
 4. Governments now know the importance of requiring wind farm operators to post bonds to cover the cost of dismantling the installations when their adverse effects are weighed against their marginal contribution to the energy supply.
 5. The inevitable suspension of subsidies – now occurring elsewhere in the world.
 6. The class action lawsuit that property owners will launch for the loss of 1.875 billion in property value and similar actions to be taken for losses to businesses dependent on tourism. These suits can be launched now as property values and tourism decline.
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END TO SUBSIDIES INEVITABLE

WHAT ABOUT THE GOVERNMENT OF ONTARIO?

This is what I have to say to them:

Remember that wind is renewable but Point Pelee National Park is not.

Remember that wind is renewable but the Towns of Leamington and Kingsville are not

Remember that wind is renewable but the sick and elderly who suffer when you drive them from their devalued homes are not.

Remember Walkerton and Caledonia

Remember that governments are elected by people and you are alienating people from North Bay to the Great Lakes

We know that wind power brings no reasonable net gain in power (3 to 5 per cent)

We know that it will not reduce CO₂ emissions most of the time and will lead to increases in that pollutant much of the time.

We know about the misery that wind farms are inflicting on the people who live near them.

In short, the people will not vote for any one – Liberal or Conservative – who makes fraudulent claims to support a policy that betrays the public trust. Electricity is far too important to our jobs and well being for us to tolerate anything less than the truth.

MEDIA RESPONSIBILITY

CLOSING REMARKS

Thank you to everyone for being so patient with me for this very long presentation.

Copies of these notes are available to the media now and to others on request.

Media representatives, use the *Freedom of Information and Protection of Privacy Act* as discussed to access government/developer 20-year contracts. How much will the public have to pay in taxation for this government's folly?
