

Recommendations on the Commercial Scale Wind Energy Facilities By-Law to Bluewater Council

Presented by Paul Mennill, President, Bluewater Shoreline Residents' Association - July 14, 2008

I speak on behalf of the Board of BSRA. After much consideration, we make the following recommendation to Bluewater Council.

The set-back distance from all urban/settlement areas in Bluewater must be 2000 metres. In other words, commercial scale wind turbines should not be constructed any closer than 2 kilometers from the Shoreline, from the Bayfield Settlement Area, Dashwood, Zurich, St. Joseph, Varna, Hensall, Exeter, Blake, Brucefield, Kippen, and Clinton.

I would like to give 6 points which explain this recommendation.

1. The Debate on Windmills has intensified and informed opinion varies widely.

- A strong state of uncertainty about the efficiency and the proper location of Wind Turbines still exists. Therefore Council should make decisions on the side of caution. It is important to protect our citizens, our landscape and our inheritance.
- The world-wide debate on wind turbine projects is vigorous, ongoing and inconclusive.
- The Province of Ontario has placed Council in a position where we seem forced to accept the inevitability of giant wind turbines without knowing all the information necessary to make wise decisions about where to locate them. This is the same government that in 2005 enacted the Provincial Policy Statement stating that important agricultural areas should be protected from non-related development. It also said that natural areas should be protected for the long term. It said that in agricultural areas, secondary uses must be limited in scale. One wonders why this same government seems to be encouraging the use of agricultural land and natural areas for large industrial-commercial wind operations.
- This is the same government that said that it plans to support ethanol production by raising the required amount of ethanol in gasoline to 10% by 2010. However, just last week the Premier said he is rethinking this commitment because of the rise in food costs. If the government can rethink this part of its energy policy because of new information, then we can only conclude that it is quite possible it may re-think its policy on wind energy when it gets new information claiming that the set-backs were too short or that the costs of transmission lines are too great.
- If we are forced to accept wind factories, then we must be very careful where we put them.
- A survey of the literature makes it clear that some people will be winners and some people will be losers. The winners will be (1) the developers and utilities who will reduce their tax liability and increase their profits (2) the relatively few landowners who receive payments from the developers (3) suppliers of turbines and their agents. The losers will be (1) electricity consumers who are forced to pay higher costs of electricity (2) taxpayers who pay the taxes escaped by Wind Turbine developers who get the tax shelters (3) neighbours of wind turbine facilities who experience property value losses, noise from many turbines, and the possible health effects of low vibrations (4) citizens and tourists who are offended by the scenic impairment and environmental impacts.

- We are not even certain that the development of wind energy will have a substantial effect in our efforts to reduce carbon emissions, because wind energy has to be backed up by other forms of energy.

2.0 Green Energy Sources have become popular.

- Popular opinion has clearly swung to the idea that we must do everything possible to combat climate change, and therefore we must support the development of renewable sources of energy. People love the IDEA of wind power. Wind energy is a FEEL-GOOD project.
- But what has also arisen is the concern that the IDEA of wind power leads to the REALITY of constructing gigantic machines in places never before considered industrial.
- A good example is very close by. Many people have commented about their own negative reactions as they drive through the 6 large turbines on highway 21 near Kettle Point. There is something shocking about their size and location, and their eerie sense of circular motion. The over-powering nature of those turbines located so close to the highway is clearly distracting to drivers. This wind-farm with the huge turbines is frightening for many people. It seems entirely wrong to drive through the agricultural and village landscape of the Bluewater highway only to encounter six turbines, each one higher than a 20 storey building.
- There have been many stories of people living near turbines who have had to leave their homes because they cannot sleep at night. These stories range from Huron County to Nova Scotia, from the USA to the Netherlands.

3.0 The Dilemma Faced by BSRA

- Since our mandate is to advance the interests of Shoreline Residents, we are clearly pleased that the draft by-law prohibits commercial scale wind energy facilities in the area west of highway 21.
- But, because there may be significant problems for many people living east of 21, the proposed setbacks are not enough.
- BSRA has been working for several years on community development projects which try to overcome the gap between Bluewater farmers and villagers, and Bluewater shoreline residents. We are trying hard to help bring the community together. We don't want to jeopardize this process by opposing wind farms, because we know that some farmers stand to gain financially by locating commercial turbines on their properties. However, we know that there are many Bluewater residents both east and west of 21 who are opposed to huge commercial-industrial projects.
- We recognize that there has been an income crisis in farming. But we do not believe that the erection of industrial-commercial wind turbines is a positive part of the solution to the problem.
- In addition, there are many people who question the economic viability of wind power and who support other technologies which may be economically and environmentally superior.
- Our members have advised us to ask Council to base the by-laws on adequate research, on citizen input, on the protection of the environment and property values, and on human and animal health.

4. Geographic Differences in different provinces and countries

- Unlike countries that have developed large wind energy projects, it is very hard in rural southern Ontario to draw a line to say that the urban area stops here and the agricultural area starts there. Settlement patterns are quite different in different parts of the world.
- I have seen thousands of giant wind turbines in several parts of the world - most recently in Spain and Portugal. But never once have I seen a wind turbine project closer than 3 or 4 kilometers from the closest habitation. Usually they are much farther than that from any village or town. The reason for this is that the geography and settlement patterns in Spain and Portugal are radically different. All of the wind turbines that I saw are placed on mountains or extremely high ridges – well removed from any human habitations.
- In our more densely populated rural areas on the flat terrain of southern Ontario, it is much more difficult to set the wind turbine projects back sufficiently from houses, businesses, and highways.
- Even in countries with a geography closer to that of southern Ontario, like Germany and Holland, the setback distances are much greater than our draft by-law proposes (Germany 1600 metres, Holland 1800 metres).
- Don't assume that we can locate wind turbine projects in the same way as other countries or provinces which have a different physical geography and a different settlement/land-use pattern.

5. Examples of local struggles

- All across Ontario and many other places, citizens have filed formal objections to wind power projects. Some of these have gone to the OMB. These are not radical-fringe people but concerned, environmentally-aware, and well-informed citizens.
- Ashfield-Colborne-Wawanash has been struggling to pass a zoning by-law for two years. Their planner reported to Bluewater on May 12, 2008, that science-based evidence indicates that the setback may need to be larger than the proposed 600 metres from settlement areas and 450 metres from houses. She also reported that ACW has had to consider the clanking sounds of the turbines, the volume of the whooshing sound, the climatic conditions which increase the volume of noise, and the low level vibrations that are particularly bothersome at night-time.
- On Wolfe Island at the eastern end of Lake Ontario, the battle has been strong. The citizens' group called "Coalition to Protect Amherst Island" has made a compelling case that repetitive noise, low-frequency infra-sound from wind turbines, and flicker-effect may be implicated in serious health problems.
- According to the Orangeville Citizen, as recently as June 22, 2008, a meeting called by the Amaranth Citizens' Coalition turned into a vigorous presentation by farmers and land-owners opposing the erection of wind turbines.
- The case of St. Lucie County Florida is particularly interesting because it involves the Florida Power and Light Company – the huge American corporation that is planning to build wind turbines here in Bluewater. The Florida Power and Light Company is the largest owner and operator of wind power projects in the United States. It has annual revenues of \$16 billion. It is heavily involved in the production of electricity from natural gas, nuclear reactors, oil, coal-fired power stations and solar collectors. In St. Lucie County on the coastline of Florida, according to the Orlando Sun-Sentinel, the FLP has encountered a great deal of local opposition to its plan to locate giant turbines on beachfront conservation lands. "Fierce grass-roots opposition has arisen" says the Orlando newspaper. One wonders what kind of profits or incentives cause such a huge

American corporation to place its attention on a small community like Bluewater in Canada. And why would Bluewater want to send profits to such a corporation?

- In the Province of Manitoba, citizens have caused a significant change in some setback requirements – from 500 metres to 2000 metres.
- These examples raise the question of whether Bluewater wants to enter such controversial and bitter conflicts. If not, Council should be very cautious in allowing wind factories close to the places where people live.

6. Scientific Comment

- Dr. Nina Pierpont, international authority on Wind-Turbine Syndrome, recommends an absolute minimum setback of 2000 metres. She presents case studies of 10 families affected by wind turbine syndrome whose symptoms include sleep disturbance, headache, dizziness, and nausea.
- In France, the National Institute of Medicine recommends 1500 metre setbacks.
- Dutch scientist G.P. van den Berg has pointed out that 98-metre tall turbines in Germany have made more noise at night than was expected. This has had a significant impact on discussions about setbacks right around the world, including in Huron County.
- John Harrison, Professor of Physics at Queen's University in Ontario, in an important paper on noise effects on health, describes the misleading way in which noise levels from wind turbines are currently measured. By averaging the highs and lows of the sound over one hour to get a rating, all the peaks where the noise level is well above the permitted levels are erased. He says the Ontario guidelines are inadequate and that setbacks should be more than 1000 metres.
- William Palmer, an engineer from Paisley, Ontario, has said in a report on Setbacks to Wind Turbines in Ontario "The evidence makes it clear that to prevent being above the Ontario standard, no wind turbine with a noise characteristic such as the Vestas V82 can be located nearer than 900 metres from any house. In some cases, the noise setback needs to be greater than 900 metres depending on the grouping of turbines." He goes on to say that a noise setback to any home should be 1000 metres.

Exactly what are we suggesting to Council?

- The Board of BSRA is not opposed to wind-power as a potentially beneficial alternative energy source to meet a small amount of Canada's power requirements. But we are opposed to the creation of industrial-scale wind-turbine installations which, by their size and noise, have the potential to damage the health of Bluewater residents and the natural environment of our landscape.
- We are pleased that the current proposal includes a prohibition on wind turbines west of highway 21. But as members of the larger Bluewater community, we believe that this does not go far enough.
- We recommend a set-back of 2000 metres from all urban/settlement areas (shoreline, hamlets, and villages).
- We are concerned about costs and inefficiencies, and recommend that the answers should be much clearer before Bluewater makes by-laws permitting giant turbines any closer than 2 kilometers from settlement areas.
- We fear that the Ontario guidelines will not sufficiently protect the natural environment, the health of some inhabitants, the landscape, and property values in the municipality.