

Bring in 'da Noise, Bring in 'da Facts

Wind power generates noise at levels that Ontario says must meet enforceable standards—but it has no enforceable standards. The long shabby story of wind noise from the province's wind energy regime: Misguided Direction or Failure to Communicate?

By Parker Gallant

Donna Cansfield, currently the Parliamentary Assistant to the Minister of Municipal Affairs and Housing, in October 2005 was appointed the Minister of Energy, taking over that role from Dwight Duncan. On November 16th, 2005 one of the first major acts that Ms. Cansfield undertook in her new position was to issue a “Direction” to the Ontario Power Authority instructing it “to enter into contracts contemplated by the RES II RFP” for up to 1000 MW of new electricity supply derived from renewable energy. Nine of these were selected and named in this direction and eight of these were wind power projects, in Chatham Kent, Kincardine, Townships near Algoma, Huron County, Huron-Kinloss, Melancthon & Armaranth Townships and the Township of Frontenac Islands.

One wonders if Ms. Cansfield at the time she signed this direction realized the effect she would have on the future of dozens of people that would be health impacted by her “direction” or the hundreds of thousands that would be affected by the financial implications of what she did.

Ms. Cansfield, MPP for Etobicoke Centre, in her bio claims she represents “a riding with Canada's largest proportion of senior citizens, Cansfield has served as a director of a hospice and has been active on other health care efforts. She has continued to work with her constituents to recognize key social goals and formed partnerships to achieve them.”

Did Minister Cansfield recognize that those *key social goals* she exudes would be impacted severely for seniors living in proximity to those industrial wind turbines? Did she recognize the effect high energy prices would have on their ability to continue to live in their homes with energy costs raising rapidly, forcing many on fixed incomes to become energy poor.

Those seniors and others that wound up living in the shadow of those 350 to 400-foot turbines became fodder for those out-of-province wind developers and the various provincial ministries that claimed major and minor responsibility for the industrialization of rural communities and the effects they might have. Obviously the Ministry of Energy had primary responsibility through the letting of the contracts. Others responsible included the Ministry of Natural Resources on siting to protect wildlife and wetlands and the Ministry of the Environment for similar reasons but also to protect humans from the resulting intrusions (noise is but one example) of the new giants on their daily lives. On the periphery, the Ministry of Health, who presumably ensure any negative health effects on Ontario residents would be dealt with, also is involved, as is the Ministry of Municipal Affairs and Housing via the Municipal Property Assessment Corporation (MPAC), who would have to deal with any effects on property values and the resultant tax revenues for the municipalities hosting these turbines.

While the advent of renewable energy was seen to be a means of achieving a slowing of global warming, the effects of these large wind turbines wasn't actively studied by those ministries. Renewable energy policies were basically developed by politicians who believed that a myriad of civil servants from a plethora of different disciplines would somehow magically get the job done. Noise, building codes, environmental standards and other rules and regulations existed and these were merely adapted to fit the erection of these wind turbines while the standards associated with the contracts were

simply lifted from European countries.

To cite one example of those on Ms. Cansfield list, Phase One of the Amaranth wind development by Canadian Hydro Developers Inc. used Stantec Consulting Ltd. of Guelph, Ontario to complete its Environmental Screening Report dated February 2005 and it in turn used a Montreal-based firm, Helimax Energie Inc., for the “noise” sector portion of that report.

Helimax some three and a half years later presented a paper at the June 2008, World Wind Energy Conference that had this to say:

“Being one of the main concerns of residents living in proximity to wind farms, the noise impact of wind turbines must be quantified with precision. Indeed, the main challenge of performing a judicious noise impact assessment is to accurately determine the noise contribution of operational wind turbines. During the wind farm’s development phase, the assessment of such impact is based on an internationally-recognized numeric simulation model for sound propagation (defined in the ISO 9613-2 Standard), while the pre-construction measurement of ambient noise is done in accordance with ISO 1996 Standards and local regulations.

Conversely, no recognized standard exists for measuring the noise impact of an operational wind farm.”

So, three years after information used for Phase 1 of the Amaranth wind development in the Environmental Screening Report was used to secure the licence from the Environment Ministry, we learn in February 2005 and even by June 2008 that **“no recognized standard exists for measuring the noise impact of an operational wind farm.”** .

This conference was held in Kingston, Ontario and attended by then Minister of Energy, George Smitherman and Minister of the Environment, John Gerretsen (appointed 2007) and the latter even graced the conference with \$100,000 of our tax dollars. That the two ministers failed to attend this presentation should be a given but surely someone from either of the two ministries should have read the papers presented at that conference for clues on what might be missing from Ontario's rules and regulations that were being used at that time to grant licences to wind developers.

That a recently leaked paper <http://windconcernsontario.files.wordpress.com/2011/06/moe-approval-of-wind-projects3.pdf> from the Guelph district office of the Ontario Ministry of the Environment that stated; “EAAB has knowingly issued a series of Certificates of Approval (AIR) that are unenforceable” should come as no surprise. With no “recognized standards” the civil servants within the various ministries cannot enforce compliance when none exists or is required by law or regulation.

The health complaints when submitted by anyone affected were and still are generally ignored and the party that issues the complaint often winds up at the doorstep of the wrong ministry. A recent story <http://www.thespec.com/news/ontario/article/527190--750-wind-turbine-complaints-came-from-50-people> indicates the Environment Ministry is getting its fair share, having received 750 complaints in the past two years. At present there are only about 800 wind turbines installed throughout Ontario but by 2018 Ontario will have in excess of 4500 (based on the Liberal's Long Term Energy Plan) so by extension the Environment Ministry should expect complaints to climb to 4000 unless the 550-metre setback is changed.

The Health Ministry has basically accepted the findings of others in reaching their conclusion of May

2010 endorsing the wind turbine setbacks established by the Ministry of the Environment. That Dr. A. King, Ontario's Chief Medical Officer, was supported by that bastion of doomsday prophecy, Gideon Forman, of CAPE, <http://www.cape.ca/> presumably adds weight to her dismissal of any attacks on the Environment Minister's licensing requirements for industrial wind developments that may be health related. Set that conclusion aside, however, as more and more anecdotal and peer reviewed medical studies are concluding that there is substance to the complaints and legitimate medical science to back up those complaints. The anecdotal stories are global, wherever wind turbines have popped up, and medical science seems to be catching up with reports coming from Australia, USA, New Zealand, Denmark and Japan. Detractors will claim that the ailments reported can be cured by money, i.e.; pay me to lease my land for wind turbines and my symptoms will simply go away.

The developers, supported by biased studies commissioned by CanWEA or the American Wind Energy Association, would allude money will make the complaints go away. They go as far as to buy the home or farm to end the complaint. They are willing to do this because they are often caught violating “noise” standards and use their “foot on the throat” negotiating skills. They first resist any attempt to admit they are at fault by stating they are in compliance but eventually, perhaps after being threatened with legal action, will offer to purchase the property as long as a “gag order” is signed. Knowing that the Environment Ministry has no teeth in respect to noise compliance and enforcement gives them a “can't lose” position. The gag order is basically to prevent any offensive comments about either the developer or the industry. The properties being purchased are often already abandoned and the families have moved for health-related reasons caused by the reputedly noise compliant wind turbines. These homeowners never planned on moving until the intrusive industrial wind turbines were thrust upon them and caused health problems. Many of the sales have been quietly leaked. But, “gag order” sales are discernible through a check of land registries at municipal offices to find out who your neighbour sold their property to.

Many of those “gag order”-related sales have surfaced and many other complaints remain unresolved. These latter ones have also produced many people who are very outspoken about how they have suffered wind turbine related health effects. There are over 25 families (at least five in Amaranth alone) that have publicly disclosed their health-related problems but the various ministries, including Health have not altered or changed their outright denial that there are any health effects.

Most complaints have been ignored or the message back to the complainant was simply that the offenders were in compliance, despite conclusive evidence that the noise guidelines had been exceeded, sometimes by over 50%. Often these noise and vibration complaints would result in visits to the properties by Ministry of Energy and Infrastructure officers, unqualified to conduct any noise or vibration measurements, and at other times the complainant would be presented with noise measurements studies conducted by companies contracted by the developer, thereby avoiding an unbiased study. The latter studies concluded that the noise limits were within the guidelines established by the Environment Ministry.

When Dr. King released her “report” in May 2010 the covering press release contained the following:

QUICK FACTS

- The Ministry of the Environment regulates wind turbines in Ontario.
- The minimum setback distance for wind projects is 550 meters; this intends to ensure noise levels do not exceed 40 decibels at the nearest residence.
- Forty decibels is approximately the noise level experienced in a quiet office or library.
- Ontario has over 690 wind turbines.

I have viewed sound measurements reports from the Ministry of the Environment which exceeded the 40 decibels by almost 30% and have noted that in accordance with the methodology utilized by the Ministry 40 decibels is not the high end as its allowances are related to wind speed. The Ministry will allow 51 decibels based on higher wind speeds. This is almost 30% greater than those touted as “experienced in a quiet office or library” per the King report. My research of normal decibel levels in a library indicates a range of 30dBs to 40dBs, which would make 51dBs 70% higher than the lower level. Research indicates a “clearly notable change” occurs with only a 5dB change and a 10dB change is equivalent to being “twice as loud” because noise is measured on a logarithmic scale similar to earthquakes. An increase of 10dB is roughly equivalent to a doubling in the perceived sound level.” Additionally the noise produced by wind turbines is defined as “tonal” (e.g. sirens, saws, etc.) and is much more intrusive. Normally a 5dB penalty is applied for tonal noise, including that emanating from wind turbines. It is not clear or obvious that this penalty is applied by the MOE. The practice of measuring noise levels by the MOE require them to do so at two metres above ground level, clearly not capturing the full conical nature of sound from either the turbine or blades. To top it off no measurements of low frequency noise are even made by the MOE.

So, what are we to perceive of the Ministries of Environment and Health when they don't have either the capabilities of setting or measuring standards in respect to noise or the inclination to investigate further when levels against their standards are exceeded? No evidence exists in the public domain that warnings or fines have been issued or applied, nor restrictions placed on the *time of day* operation of these turbines by the MOE. One can only surmise that they either don't care about health concerns or they have simply accepted the precepts of the pro-wind groups like CanWEA that consist of wind developers, equipment manufacturers, corporate lawyers who benefit from wind development companies as clients or sustainable energy groups whose zealous beliefs in global warming and CO 2 as a pollutant take precedent over those families who are directly affected by intrusive noise levels and forced from their homes.

Health, quality of life and declaring electricity as a non-essential service by creating energy poverty seems at odds with the basic premise that politicians are elected to execute the “will of the people.” How the existing elected officials square this with their constituents will be something that will be reflected in the upcoming election! Defending their premise may be difficult!

Parker Gallant is a retired banker who looked at his electricity bill and didn't like what he saw.