



April 13, 2016

In respect of Comments made by Dr. Geoff Leventhall to
The National Institute of Public Health --- National Institute of
Hygiene (Wind Turbine Policy) Poland

As well as additional relevant commentary

To whom it may concern:

We have had an opportunity to review the comments to the National Institute of Public Health, and the Public Institute of Hygiene, on the suggested revised policy on setbacks for wind turbines and related matters, Poland, provided by Dr. Geoff Leventhall.

The comments we offer here are from a group that has variously studied industrial wind for literally thousands of hours, likely now ten thousand; we comment from our position of providing information, consultation, and linking of groups and individuals, professionals, to each other on the topic of industrial wind, as well as acting as a support group for victims. We also sadly receive weekly, or sometimes daily phone calls and messages from victims of wind. Our particular ability to comment on Canadian and Ontario standards of setbacks is close up and personal. We also reference our work with other North American groups, who are members of our umbrella, or who have contacted

us to ask for assistance and support, or who wish us to be aware of their suffering. We offer our observations and respectful suggestions.

I myself, as CEO of NA-PAW, am a resident of Ontario, Canada, and have written on the failures of the Health Canada study, as well as the bookend piece, prepared by the Canadian Council of Academies. We suggest, as many others have, that these two studies, are incorrect or improperly conducted, in our view, should not be reference points for other jurisdictions in the placement of turbines. These two "studies" are deeply flawed, as has been pointed out by many. They have failed to disclose data, even to the media, and the subjects themselves who reported to various Stats Can representatives did not find the study results reflective of their reporting. Groups of vulnerable citizens were excluded from this study (no one under the age of 18 was included), and an astonishing number of homes, and farms, were vacant, or absent from the study, for a variety of reasons, and not accounted for. One reason of course, might be home abandonment, sales, foreclosures, some citizens bought out by a developer, to have the home razed. Given the dollar amount allocated to this important study (HC), many have pointed out how little it might have cost to discover the reasons, and in fairness *add in the reasons for these properties, homes, to have been excluded from the findings.*

"For a watchdog federal health branch to suggest that there are no health effects from Wind Turbine Noise, when Ministry of the Environment Officials with firsthand knowledge have confirmed the problems and so too has the Environment Review Tribunal itself, is completely astounding," said Lange of the North American Platform Against Wind Power (NA-PAW). "Try telling this to a family with family members who are chronically sleep deprived and unwell, unable to live and sleep in their own homes, that has lost 30% or more of its livestock, or who has for eight years been living in the shadow of multiple installations, and perilously near to a clearly dangerous substation. Try telling this to folks who have left their homes after being bought out and gagged by the developers."

Citizens are not being taken OUT of harm's way, but increasingly placed directly in the line of fire."

As noted in many critiques of the HC study, the study itself references its advocacy FOR wind development in Canada, with the hope of 20% by 2020. An impossible dream, mercifully.

[As Denise Wolfe writes in her critique:](#)

"The continued success and viability of wind turbine energy in Canada, and around the world, will rely upon a thorough understanding of the potential health impacts and community concerns. It is absolutely astonishing that Health Canada should express concern over the "continued success and viability of wind energy" (our emphasis) in the context of a study supposedly designed to objectively measure the potential negative health impacts that could result from exposure to wind turbine noise. The information provided in this review is the foundation for the opinion that the Wind Turbine Noise and Health Study information so far released by Health Canada cannot be used as the basis for the claims that are being made by Health Canada that there is no association between wind turbines and specific adverse health effects 2 ."

It is easy to see the premise and objective of the study: *Designed to provide "continued success and viability" of wind power.* Sadly, policy has upped the health of Ontario residents. We currently know of 146 families who have vacated homes, been bought out by developers, or who have sold at greatly reduced values, or who have moved out of province, or dozens, even hundreds more, who currently live in second residences, or in the parking lot at Walmart, in an RV. People do not simply move out of beloved homes for no reason.

Again, as an organization with outreach to all parts of North America, and with daily relationships with professionals and individuals with high level research skills in other countries, we all have the ability to see the synchronicity of experiences with industrial wind. Symptoms and reports are the same, and even the distances at which victims

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report ill health and ill health of animals, livestock, pets, are of a common ground.
Proximity IS causing harm.

One thing is absolutely clear: Ontario's standard of 550 meters has created a disaster zone. It is without any question putting people and animals in harm's way. And as Dr. Robert McMurtry, Order of Canada, and esteemed retired orthopaedic surgeon tells us: there is no way to really ascertain what is a safe distance, because inner ear physiology and individual sensitivities are unique. He adds that some report ill health at much longer distances than 2 km. Indeed, [Dr. Sarah Laurie suggests that 10 km](#) is a starting point for safety.

It is interesting to hear Dr. Leventhall refer to the ERT (Environmental Review Tribunal) as a valid reference point on health and turbines: indeed, the ERT has historically NOT wished to measure health, and has in the first ERT (Chatham Kent) provided the small proviso that turbines can be deemed to cause harm, but the degree is not known. This statement has provided much anxiety to those victims whose bodies are receptacles for lack of sleep, tinnitus, migraine, inability to concentrate, fullness of the head and chest, high blood pressure, increased risk of disease, associated health breakdowns and deterioration, and whose lives have been impacted in many instances, dangerously. I myself have received well over 100 phone calls from individuals in deep distress, honest, hardworking people whose lives are turned upside down. Some of these persons have children, who suffer without knowing how to pronounce the word, turbine, or tinnitus, have had to visit emergency rooms 11 times for earaches, and who on removal from the proximity to turbines, appear recovered. Again, the ambiguous statement by the ERT has left us with an almost idiotic semantic problem: who defines serious harm, as Dr. Christopher Hanning asks, and who decides, and how much suffering will continue as this ridiculous bit of verbiage gets packaged around the world?

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We wish to point out that in Ontario, the ERT is a completely flawed process, designed to do one thing: push industrial wind with the appearance of fairness, and a very fast quasi judicial timeline, in order again, to give even more justification to a permitting process that is unfair. One crime on top of another. The process itself is described in [a recent blog by Wolf Hill](#).

"The ERT appears to be nothing more than a Kafkaesque-Potemkin-kangaroo-emperor-with-no-clothes court.

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."

*The ERT 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."

We ask you to seriously reflect on our Ontario experience, the real one. Please also view a comment by our colleague in Germany, Marco Bernardi, who is responding to siting considerations in Wisconsin, USA, as well as a petition to the MOECC (Ontario Ministry of

the Environment and Climate Change), of today's date referencing again homes too close to a wind turbine with obvious health impacts.

We wish to address a few of the disagreements we have with the Dr. Geoff Leventhall paper submitted to your government.

Point 2, Line 8: as referenced by Dr. Leventhall. Dr. Leventhall in our view trivializes the noise impacts from industrial wind turbines, because there are obvious other sources of troublesome noise in our environments. However, it is well established that industrial wind turbines are tricky business in this regard, as they have impulsive characteristics, and multiple "organisms" of noise, noise and effects from vibration, shadow flicker, and ILFN, not generally heard audibly, but certainly causing impact. It is hard for us to imagine this cocktail of impacts, and how it might and does affect people, especially the vulnerable, the children and elderly.

"Studies carried out in Denmark, The Netherlands, and Germany (Wolsink and Sprengers, 1993; Wolsink et al, 1993), a Danish study (Pedersen and Nielsen, 1994), and two Swedish studies (Pedersen and Persson Waye, 2004, 2007) collectively indicate that wind turbines differ from other sources of community noise in several respects. These investigators confirm the findings of earlier research that amplitude-modulated sound is more easily perceived and more annoying than constant-level sounds (Bradley, 1994; Bengtsson et al, 2004) and that sounds that are unpredictable and uncontrollable are more annoying than other sounds (Geen and McCown, 1984; Hatfield et al, 2002)." Wind turbines: What audiologists should know: By Jerry Punch, Richard James , and Dan Pabst

Our consideration of line 8, the value or lack thereof, of the Ontario ERT (Environmental Review Tribunal), has already been discussed above.

Regarding the statement:

“However, after giving this opinion, the Tribunal found that wind turbines designed according to Ontario regulations did not cause serious harm to human health. The minimum separation distance for Ontario is 550m. In the past few years there have been 12-15 further Environmental Review Tribunals in Ontario. None of these have found that wind farms, when designed according to the criteria required by Ontario regulations, cause harm to human health.” (Leventhall)

Our notes: There have been over 40 ERTs with relation to industrial wind in Ontario, and the bar set by the Tribunal to establish “serious” health concerns was fairly well understood early on in the process, **to be something unattainable**. Despite the testimony of experts such as Dr. Robert McMurtry, Rick James, and numerous others, the ERT lawyers for appellants were unable to convince the Tribunal with the reality of impacts in Ontario. The only “stays” or temporary holds obtained by appellants have been on environmental grounds, and those two victories, partial, have not yet had final decisions handed down. The ERT is merely a rubber stamp for ready set go approvals.

In essence, the ERT is a Kangaroo court, one that is designed to fail the public in the chase for so called “renewables.” As of yesterday (Collingwood and Clearview), another ERT appeal began its course, this one to be challenged also on the basis of Criminal Law.

Point 3, Line 13: Dr. Leventhall indicates that the ambient noise levels, pre construction, are “well established,” and imputes that manufacturers provide safe levels of sound at established distances using established methods. “The use of prediction then prevents risk to human health.” This is patently false. Please review the information from this site, [wind wise, MASS, where again the levels actually measured by a resident reflect something quite else. Prediction is not reality, especially when one wishes to observe pre ordained outcomes.](#)

Point 4, Line 15 references again minimization of ILFN effects. It is well-known that ILFN does cause harm to humans and wildlife and pets. Please see these references, which are only a small sample of available data and information.

<http://www.windvictimsonario.com/> October 14, 2014. The Brown County Board of Health issued a “Human Health Hazard” warning regarding its year long study of residents and experts:

“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.

<http://www.windvigilance.com/about-adverse-health-effects/low-frequency-noise-infrasound-and-wind-turbines>

It is even more confusing, perhaps, because Dr. Geoff Leventhall writes previously:

"More specifically Geoff Leventhall, a *coauthor of the wind energy association* sponsored ["Wind Turbine Sound and Health Effects"](#) states:

"The symptoms of... Wind Turbine Syndrome...sleep disturbance, headache, tinnitus, ear pressure, dizziness, vertigo, nausea, visual blurring, tachycardia, irritability, problems with concentration and memory, and panic attack episodes associated with sensations of internal pulsation or quivering when awake or asleep...I am happy to accept these symptoms, as they have been known to me for many years as the symptoms of extreme psychological stress from environmental noise, particularly low frequency noise." [24]"

We are unclear as to how tinnitus is induced "psychologically," and the symptoms he describes, as patently observable from ILFN, are some of the reported universal

symptomatology. It appears that writing for the wind institute itself, has perhaps tilted the logic.

Dr. Leventhall then references the anecdotal claims of effects, and relates those to “attitudes,” and beliefs. This is the typical mantra of the industry itself: that people are predisposed to dislike turbines, and hence experience the nocebo effect. [Please see NA-PAW’s comments on this assertion here.](#)

“Perhaps, the wind intelligentsia says, the disgruntled are unhappy that they are not profiting from the wind turbine installations. Perhaps the subjects are just a bit crazy, even indulging in the so called, [Nocebo effect](#), whereby negative anticipation of a project infects one with inordinate fear and possible physical reactions.

Reading victims’ statements on their experiences from around the world is like reading a very clear compendium of shared experiences: medical effects (tinnitus, pressure, dizziness, nausea as an example), including emotional impacts from sleeplessness, and not excluding effects of vibration shadow flicker, audible noise, and ILFN.

*Add to this the stress of not being understood, not being taken seriously, even possibly by family physicians, in cases. The innuendo and propaganda machine has been working effectively, and it has not been easy for even medical professionals to immediately see the trees in the fog of “clean, green, free.” Sherri Lange, Master Resource, *Not in Their Minds: Denial in the Wind Turbine Debate* (Link above)*

Point 6, Line 19 references the safety of Ice Throw, according to Dr. Leventhall. Please note these examples of ice throw that have not proven quite so tidy as the description provides.

<https://www.youtube.com/watch?v=4EmYe2u6J6g>

Wisconsin example above

Current standard for safety distances is too simple

- Commonly used safety distance rule for icefall from an operational wind turbine

Safety distance = 1,5 * (H+D)

where
H = hub height of wind turbine
D = rotor diameter

- Our simulations and observations have shown that the actual safety distance may be both longer and shorter



Ice chunk of around 1 kg, observed at Norwegian wind farm.

©Lloyd's Register Consulting

Source: IEA Wind 2012, Kjeller Vindteknikk

[Please also see this article from the UK.](#) It describes chunks of ice showering a home, necessitating the turbine to be shut down.

"A spokesman for Cornwall Light and Power said: "Following reports of ice shedding on Saturday, we shut down our wind turbine at Whittlesey.

"Our people have visited the site and nearby residents, and we have agreed that the turbine will not generate until we are fully satisfied that there is no risk of ice shedding."

Point 8, Line 22. "Shadow flicker can be controlled." False. There are children and adults with various types of autism, who absolutely cannot withstand the assault of shadow flicker. While it may be true that not enough research has taken place about shadow flicker, there is clear evidence that it is problematic for some. It can only be

controlled by closing it out, which to an average homeowner, does not seem a viable solution. [See this site, Wind Vigilance. Does one wish victims to never leave a darkened room?](#)

“Wind turbine shadow flicker has the potential to induce photosensitive epilepsy seizures however the risk is low with large modern models and if proper planning is adhered to. [11],[12] Planning should ensure the flash frequency does not exceed three per second, and the shadows cast by one turbine on another should not have a cumulative flash rate exceeding three per second. [13]”

Point 10, Line 24. “Sleep disturbance is very subjective. Many people have poor quality sleep, even in the absence of external noise.” (Leventhall)

Minimizing sleep deprivation caused by wind turbines, is disturbing. To ascribe that “most people” suffer sleep deprivation, in order to soothe the serious known effects from wind turbine installations, seems to us extremely problematic. The wealth of knowledge and array of data and studies on sleep deprivation, and the established cause and effect of wind turbines on sleep patterns and health effects, is now overwhelming in volume and sincerity, and the assertion that victims’ sleep is equally disturbed to other urban noise impacts, is insulting to those who live near the arrays. Frankly, some, many of these victims call it “torture.”

[In Falmouth, the Andersens submitted testimony](#) that chronic sleep deprivation, headaches, dental injuries, and headaches, to name a few, which contributed to a suspension of a turbine operational hours.

“The Andersens have submitted affidavits and medical records supporting their claim that the nuisance produced by the turbines has resulted in substantial and continuous insomnia, headaches, psychological disturbances, dental injuries, and other forms of malaise. The court finds the Andersens’ claims that they did not experience such

symptoms prior to the construction and operation of the turbines, and that each day of operation produces further injury, to be credible. Taking this evidence of irreparable harm in conjunction with the moving parties' substantial likelihood on the merits of their claim to uphold the ZBA's finding of an ongoing nuisance created by daily 7am to 7pm turbine operation, the court finds there is a substantial risk that the Andersens will suffer irreparable physical and psychological harm if the injunction is not granted.

Please read Dr. Chris Hanning. Wind turbine noise, sleep and health.

<http://www.windvigilance.com/about-adverse-health-effects/wind-turbine-noise-sleep-and-health-by-dr-hanning>

Point 11, Line 25. Again, only too disparaging of very legitimate health concerns, including depression, in victims of wind.

Point 14, Line 35. Countries world wide have failed variously to protect human and wildlife and livestock health. The assumption that government policy to promote wind turbine proliferation also serves to protect human health, is patently incorrect. Countries world wide have capitalized on false assumptions (climate change fear mongering) to justify close working relations with developers, in an almost obscene closeness, certainly in North America, so that some pockets become enriched, while others suffer property values losses, ill health, livestock damage and/or mortality, broken communities. In addition, they [suffer energy poverty due to the escalating cost of electricity](#). In Ontario, [a recent expose showed politicians hosting fund raisers](#) with wind and solar developers at outrageous per plate fees, coinciding not surprisingly, with another announcement of more projects "coming down the pipe."

Point 19, Line 52. *“A 2km setback between wind turbines and buildings is not generally required in other countries. The NIPH-NIH position paper claims that “the recommended value stems from a critical review of study results published in peer-reviewed scientific journals”. However, it does not give any references to these journals. One should be aware that all peer reviewed journals are not of equal standard and that the quality of peer reviews is not equal.*

Point 20, Line 57. A distance of 0.5-0.7km is the typical distance at which noise criteria are satisfied and this range is used widely as a minimum separation distance. For example, 550m in Ontario.” (Leventhall)

We will comment on these two points together. Countries are now doing what Poland is now engaged in. We applaud your government for its close examination of safe setbacks and encourage you to also regard the cost benefit studies that you may have done, or perhaps are preparing to do. In several instances, municipalities and town councils are indeed adopting much more stringent setbacks and preparing we would say, as in Somerset NY, almost prohibitive packages of requirements. [Please see this article in Master Resource](#). Again, referencing Ontario, which is an abysmal failure in the protection of human health, is something quite surprising.

We add these comments by a German colleague, Marco Bernardi, whose note to Wisconsin today regarding a siting issue, speaks volumes. (Quoted with Mr. Bernardi's permission) *Following the notes from Marco Bernardi, please see a link to a petition in Ontario, Canada, to the MOECC, Minister of the Environment, of today's date. We also*

append a letter to Wisconsin Public Service Commission, by Dr. Sarah Laurie, of again, today's date. (PDF file attached)

From: "Marco Bernardi (windwahn.de)

To: napaw

Sent: Wednesday, April 13, 2016 9:25 AM

Subject: Re: Highland Wind, Town of Forest, Wisconsin

I am writing you as a wind power victim. I have to live for over 20 years aside wind turbines. For the first 18 years I lived at a distance of 320m to 750m to the nearest 6 turbines. After the dismantling of these 6 turbines in 2014 the nearest turbine is 2,5 km away. In total I am overlooking more than 150 turbines in an radius of 15 km and I am still suffering from the ILFN output.

What I have learned in all these years is that there is no habituation, only a permanent sensitization.

In Germany, two important things are in progress.

The first thing is that The German Institute for Standardization (DIN) currently updates a norm that regulates the sound pollution of technical systems near residents. The frequency spectrum in this norm (DIN 45680 - Measurement and assessment of low-frequency noise emissions) will be expanded. The range will start at 1Hz. Actually the definition of the frequency range is "Third octave bands with center frequencies of 10 Hz to 80 Hz"

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The most important innovations will be:

- a. calculating A-weighted assessment level is omitted*
- b. the separate assessment of clearly protruding component sounds and low-frequency noise without significantly protruding single tones were combined into one common process.*
- c. wind turbines will be added to the list of emitters.*

The second thing is the constitutional complaint, which will be filed with the Federal Constitutional Court in a few days.

*In this constitutional complaint the evidence is provided that there is an extraordinary high output of ILFN from wind turbines and that there is an relationship between ILFN output and health effects. **The result of the constitutional complaint is that there is a minimum distance to dwellings of 3 km.***

Please consider this experiences and information from a long-term ILFN victim in your decision.

Best regards

Marco Bernardi

ONTARIO PETITION TO ENVIRONMENT MINISTER

<https://www.change.org/p/minister-of-the-environment-and-climate-change-make-uniform-accountable-for-turbine-s->

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noise?recruiter=38217997&utm_source=share_petition&utm_medium=email&utm_campaign=share_email_responsive

Respectfully submitted by

Sherri Lange

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RESOURCES

<http://ontario-wind-resistance.org/2014/12/01/denise-wolfe-review-of-the-health-canada-wind-turbine-noise-and-health-study/>

<http://www.windturbinesyndrome.com/2011/physician-calls-for-10-km-setbacks-australia/>

<http://www.theglobeandmail.com/news/national/study-finds-no-link-between-wind-turbine-noise-perceived-health-effects/article21484223/>

<http://torontowindaction.com/wp-content/uploads/2015/05/STEPHEN-AMBROSE-AND-CCA-2.pdf>

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<http://ontario-wind-resistance.org/wp-content/uploads/2013/10/2-media-release-ERT-Kangaroo-Court-Oct-18-2013-2.pdf>

<https://appec.wordpress.com/2014/11/11/health-canada-wind-turbine-noise-and-health-study-being-challenged/>

<http://torontowindaction.com/wp-content/uploads/2015/04/MEDIA-RELEASE-CCA-APRIL-2015-v-2-.pdf>

<https://quixoteslaststand.com/2014/11/10/na-paw-news-release-on-the-health-canada-study-summary/>

<https://wolfhillblog.wordpress.com/category/wind-turbines/ontario-environmental-review-tribunal/>

<https://windwisema.org/about/noise/>

<http://www.windvigilance.com/about-adverse-health-effects/low-frequency-noise-infrasound-and-wind-turbines>

<https://www.masterresource.org/windpower-safety-issues/cooper-study/>

<http://www.telegraph.co.uk/news/uknews/3547074/Wind-turbine-closed-after-showering-homes-with-blocks-of-ice.html>

<http://www.windvigilance.com/about-adverse-health-effects/visual-health-effects-and-wind-turbines>

<http://www.windvigilance.com/about-adverse-health-effects/wind-turbine-noise-sleep-and-health-by-dr-hanning>

<https://mothersagainstwindturbines.com/2015/07/25/wind-scam-turning-germany-into-an-energy-poverty-country/>

<http://news.nationalpost.com/news/canada/wynne-defends-6000-a-head-fundraising-dinner-with-her-and-energy-minister>

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<https://www.masterresource.org/wind-siting-issues/siting-wind-new-york-i/>

<https://appec.wordpress.com/appec-concerns/health/>

