

From: Betty Ort

Sent: January 14, 2012 11:37 PM

To: Office of the Mayor; McHattie, Brian; Farr, Jason; Morelli, Bernie; Merulla, Sam; Collins, Chad; Jackson, Tom; Duvall, Scott; Whitehead, Terry; Clark, Brad; Pearson, Maria; Johnson, Brenda; Ferguson, Lloyd; Powers, Russ

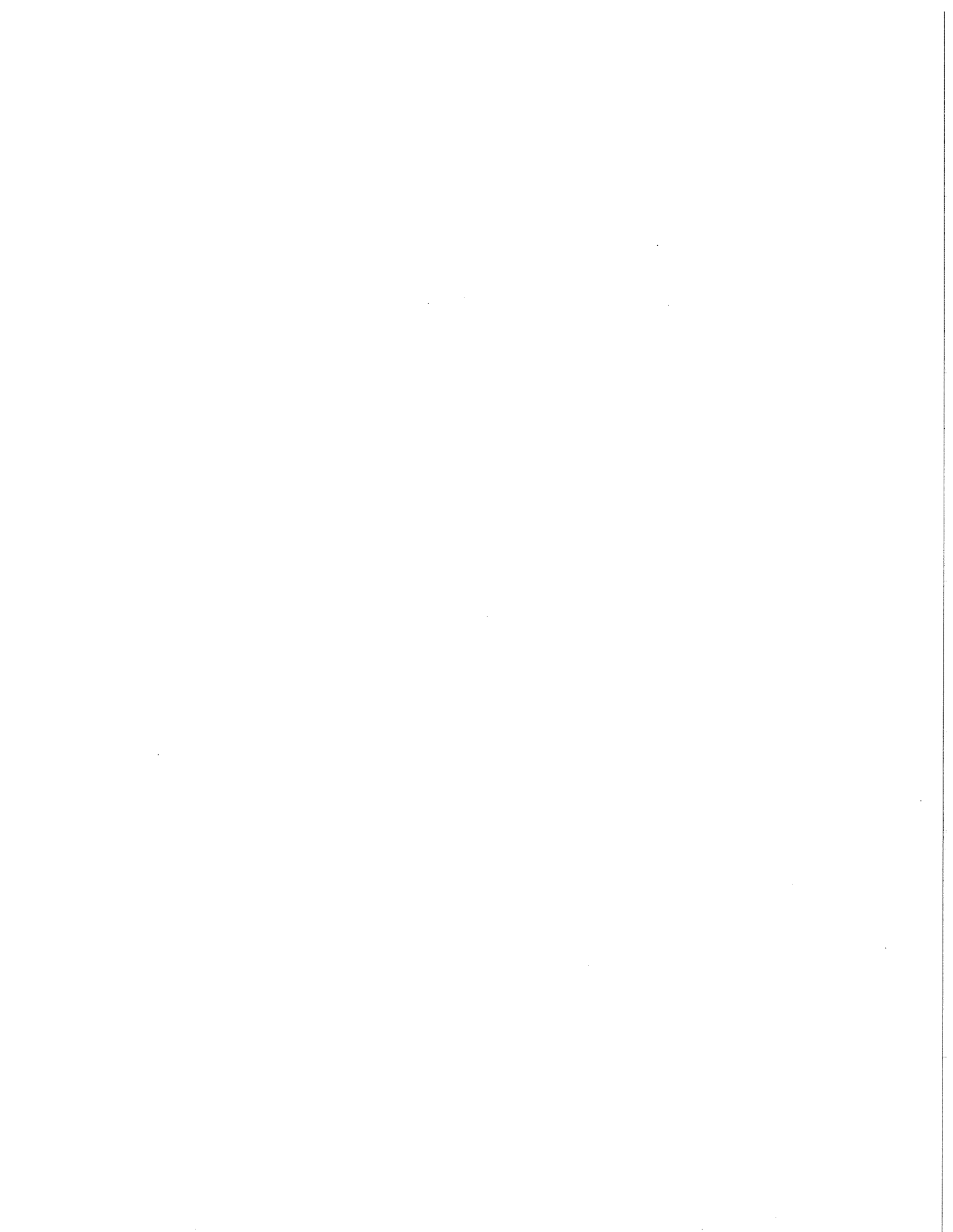
Subject: wind energy info

This document concerns your city's moratorium on wind turbine developments.

Thank you for reading the info.

If you are unable to open the document, please inform me.

Betty Ort



Electricity Rates/Jobs

The Green Energy Act and feed-in-tariffs enticing wind developers to Ontario have caused serious issues. One of these is the rising rates of electricity. The Act requires that wind energy must go on the grid first whether it's needed or not, inflated feed-in-tariff prices are paid for it and if there is an excess, it is sold to neighboring jurisdictions, often for a loss and sometimes paying them to take the excess. 50 million dollars was lost from January to May 2011 and more millions since then. We are paying wind developers \$135 per MW whether we use it or not! Our hydro rates will increase 46% by 2015 with over half of that cost due to the feed-in-tariff, as the Ontario government admits. We are now paying 6-8 cents/kWh for electricity while Denmark is paying 46 cents/kWh for their electricity which is now 20% powered by wind. In Denmark, massive subsidies and having to sell 2/3 of their wind power to Germany, Sweden and Norway below market rates have caused Denmark to now have the most expensive electricity in the developed world. Sound familiar? In an article in Financial Post last week on Oct.5, Glenn Fox, a professor of natural resource economics and Parker Gallant, a retired banker, both whom are directors of Energy Probe, pursued a study to cost out the Green Energy Act's embedded costs focusing on the numerous directives the Minister of Energy, Brad Duguid and his predecessor had issued to the Ontario Power Authority. Their study concluded that: "for the average ratepayer, an annual electricity bill will escalate from \$1,700 per year to \$2,800 by 2015 and by the time the renewables envisaged in the Long Term Energy Plan are largely in place (expected in 2018) an average rate payer will be paying in excess of \$4,000 annually - well over a doubling. Put another way, Ontario's ratepayers will be paying in excess of 40 cents per kWh." Ontario can't afford to go the way of Denmark.

Would you buy a car that worked only 30% of the time because that's how intermittent wind energy is. Other sources of power have to be at the ready to power up when there is no wind and Denmark has not reduced its CO2 emissions due to the addition of wind power as coal-fired plants back them up. Ontario has the highest industrial electricity rates in Canada now, more than double those of Quebec and Manitoba. Our manufacturing has already been affected by rising electricity rates. What will happen to our remaining industries when rates double? A new study called "Worth the Candle" by Versus Economics shows how green jobs destroy other jobs through the diversion of resources and the denial of abundant sources of fossil fuel energy. In the UK, the loss of jobs is 3.7 jobs for every green job created. In Spain, Dr. Gabriel Alvarez calculated that for every green job, the country had destroyed 2.2 jobs in the real economy.

The rising cost of electricity is only one serious issue that the Ontario Government's Green Energy Act and feed-in-tariff program for renewables are causing but it is one problem that will negatively affect everyone. Ontario is headed for the same demise as Denmark but it's not too late to get this right in Ontario. Scrapping the Green Energy Act and feed-in-tariff would help restore our democratic rights, would return the energy system to the competitive market of supply and demand which is sound economics, would help our manufacturing sector and would keep all our electricity rates from soaring out of reach.

Health

All around the world, many people who live in proximity to industrial wind turbines are suffering identical health effects and in response to studies of these effects, experts and governments are recommending further research and setbacks of more than the current 550 m setbacks we have in Ontario.

The Ontario Environmental Review Tribunal decision in Chatham-Kent in July of 2011 found that "the debate should not be simplified to one about whether wind turbines can cause harm to humans. The evidence presented to the Tribunal demonstrates that they can, if facilities are placed too close to residents. The debate has now evolved to one of degree. The question that should be asked is: What protections, such as permissible noise levels or setback distances, are appropriate to protect human health?"¹ The tribunal also recommended that further research should be done. Already in the same location as the where the ERT was disputed, in the Kent Breeze wind farm, a family is suffering health effects and launched a lawsuit against the wind developer in October of 2011. They are experiencing ringing in the ears, trouble sleeping, a vibration in the chest, vertigo and balance problems.

As early as 2008, people in Ontario living near the new wind developments started suffering health effects. 70 victims of the Clear Creek/Cultus/Frogmore wind farm west of Port Rowan along Lake Erie's shore signed a petition reporting their health effects. Another couple living west of Shelburne, Ontario suffered health effects after wind turbines started up in 2008. Months later, their home was one of six homes bought out by the developer but they all had to sign confidentiality agreements prohibiting them from speaking about their health problems. This couple launched a legal battle through Ontario's Freedom of Information Act and in Sept. of 2011 received 1,000 pages of internal MOE correspondence which was very revealing:

- "MOE field staff have no approved methodology to determine compliance ... for noise emissions from dispersed multiple wind turbine sources." (June 12, 2009)²
- "With regard to the noise meters we use, they are not capable of working in all climatic conditions such as when ... wind speeds are greater than 14km/h ... (July 28, 2011)³
- "It appears compliance with the minimum setbacks and the noise study approach currently being used to approve the siting of wind turbine generators will result or likely result in adverse effects ..." (April 9, 2010)⁴
- Others "describe low frequency noise from wind turbine projects in Ontario creating uninhabitable living conditions, resulting in "sleep deprivation" and in some cases individuals abandoning their homes."⁵

Hundreds of complaints had been filed with the MOE but the couple was told theirs was the only complaint, the company was in compliance, there were no problems, they'd have to get used to it. This couple risked legal repercussions and have now spoken out about their health problems. They suffered from sleep deprivation for nights in a row, a

persistent hum resonating in their house, a fluctuating vibration, ringing in the ears and when the wind was blowing harder, it sounded like they were in a washing machine.⁶

Carmen Krogh, a retired pharmacist and volunteer Lorrie Gillis conducted a self-reporting survey in Ontario. This survey has now been peer reviewed and published in the Bulletin of Science Technology. Sleep disturbance was the most common problem. Others were: inner ear problems, mood disturbances, headaches, cardiac arrhythmias and several suffered acute high blood pressure episodes. The survey's findings were presented to the Ontario Government by Dr. Robert McMurtry. He recommended: measuring for low frequency noise, following the precautionary principle, halting the development of wind projects, conducting an epidemiological study and in the meantime, listening to and helping the victims.⁷ The survey was ongoing for another year and as of March 2010, 141 responses had been received.⁸

As early as 2006, the National Academy of Medicine of France recommended a setback of 1500 m and also an epidemiological study of health effects⁹ as did Dr. Amanda Harry who surveyed 39 turbine zone residents in the UK.¹⁰ Leading sleep specialist, Dr. Christopher Hanning of the UK, also recommends a 1500 m setback.¹¹

In 2009, Dr. Nina Pierpont of New York State wrote a book called "Wind Turbine Syndrome" after interviewing 38 people and conducting research for 3 years. She discovered how these symptoms result from wind turbine low frequency noise, scrambling the body's balance, motion and position sensors. The symptoms include: sleep disturbance, headaches, tinnitus, ear pressure, dizziness, vertigo, nausea, visual blurring, rapid heart rate, irritability, problems with concentration and memory and panic episodes associated with sensations of internal pulsation...¹² The symptoms she identified are well known as the symptoms that prevail around the world wherever wind turbines are built.

In 2009, the Japanese Ministry of the Environment announced a four year study of the effects of wind farms on health.¹³

Health Canada acknowledges that "there are peer-reviewed scientific articles indicating that wind turbines may have an adverse impact on human health." (letter from Allison Denning, the Regional Environmental Assessment Co-ordinator, Health Canada, Atlantic Region to Steve Sanford on August 6, 2009)

Dr. Michael Nissenbaum studied 22 cases in Mars Hill Maine showing similar health difficulties. "This study is important because it represents the first controlled study of adverse health effects attributed to industrial wind turbines." He recommended a 2000 m setback as "there is significant risk of adverse health effects likely to occur in a significant subset of people out to at least 2000 m away from an industrial wind turbine installation." (Affidavit of Dr. Michael M. Nissenbaum, in the Court of Queen's Bench Judicial Centre of Saskatoon, Sept. 10/10)

In 2010, the state of Victoria in Australia put in place a 2 km setback and reinstated local government as the planning authority for wind projects. ¹⁴

The state of New South Wales in Australia is now proposing a 2 km setback. Noise levels will not be allowed to go above 35 decibels. In Ontario, the limit is 40 dBA but for wind speeds of 36 km/h and over, the noise limit is 51dBA. ¹⁵

In Australia, in 2011, the Waubra Foundation, a body dedicated to researching the health effects of wind turbines, recommended a precautionary setback of 10 km. It is their advice that "proceeding otherwise will result in serious harm to human health." ¹⁶

The Australian Senate in 2011 recommended that:

1. "the Commonwealth Government initiate, as a matter of priority, thorough, adequately resourced epidemiological and laboratory studies of the possible effects of wind farms on human health.
2. the planning and operation of rural wind farms should include appropriate measures to calculate the impact of low frequency noise and vibrations indoors at impacted dwellings." ¹⁷

That is exactly what this next most recent study did. On Dec. 14, 2011, the Bruce McPherson Infrasound and Low Frequency Noise Study was released. Two professional acousticians, Stephen Ambrose and Robert Rand conducted the study for 3 days at a residence in the Cape Cod area of Massachusetts near one operating wind turbine. Ambrose and Rand took measurements inside and outside of the house while living in it. Their own health began to be affected 20 minutes after entering the house and symptoms got worse. They both experienced motion sickness, ear pressure, headache, nausea, dizziness and vertigo, loss of appetite, fatigue, cloudy thinking and an inexplicable desire to get outside. Their sleep was disturbed when the wind increased. Their sound readings showed that when the wind speed increased, the strength of the low frequency levels increased indoors and corresponded with worsened health effects indoors. The last morning of the study, the turbine was off and their health improved.

Readings indicated that the house was reinforcing and amplifying the low frequency sound. They found that the outside pulsations excited the "interior acoustic pressure much like a stick hitting a drum." ¹⁸ This sounds very much like the couple in Ontario who described their home as living in a "washing machine."

This study suggests that the adverse health effects are caused by pulsations which affect the vestibular system located in the inner ear which contributes to the sense of balance and movement. This study matches Pierpont's findings of low frequency sound "scrambling the body's balance and motion. Ambrose and Rand's results "emphasize the need for epidemiological and laboratory research conducted by medical health professionals and acousticians working together" ¹⁹ and "the need for more precautionary setback distances for industrial wind turbines." ²⁰

Dr. Alec Salt has been studying the workings of the ear for 30 years. Infrasound can only be measured with specialized instrumentation capable of detecting sounds down to

1 Hz. His studies have found that the ear detects and responds to infrasound. His recommendation at the Symposium on Adverse Health Effects of Industrial Wind Turbines in Picton in October, 2011, was: "As the inner ear does respond to infrasound at levels that are not heard, people living near wind turbines are being put at risk by infrasound effects on the body... For industrial wind turbines a cautious approach could require:

- 1) setbacks of at least 2 km;
- 2) in-home monitoring of both A weighted (audible) and G weighted (infrasound) noise levels 24 hrs./day for all dwellings within 2 miles and
- 3) health monitoring studies for those living within 2 miles."

Therefore, because people the world over who live near industrial wind turbines are experiencing identical adverse health effects, researchers and responsible governments are recommending setbacks of at least 2,000 m and independent, scientific epidemiological studies which include investigating low frequency noise. It is the responsibility all levels of government to protect the health of its population. A grievous injustice has been taking place in Ontario and around the world where wind turbine installations are operating. People are suffering as you read. Act now. Do your research. You have the power to stop this from happening to the residents in your city/municipality.

Sincerely,
Betty Ort, retired teacher

Health References

¹Case Nos.: 10-121/10-122 Erickson v. Director, Environmental Review Tribunal Decision, Overall Conclusion, P.207

² MOE internal correspondence, Gary Tomlinson to Jane Glassco, June 12, 2009
<http://www.windyleaks.com/2011/08/22/ministry-of-environment-email-confirms-excessive-noise-from-industrial-wind-turbines/>

³ MOE internal correspondence, Shawn Burr to Melancthon resident, July 28, 2011
<http://www.windyleaks.com/2011/08/22/ministry-of-environment-email-confirms-excessive-noise-from-industrial-wind-turbines/>

⁴ MOE internal correspondence, Renewable Energy Approvals Technical Bulletin Six Required Setbacks for Wind Turbines, Cameron Hall to Jane Glassco, April 9, 2010
www.cbc.ca/news/pdf/MOE%20Cameron%20Hall%20Memo.pdf

⁵ Gillespie, Eric, Ministry of the Environment Web Page - "The Sound of Science", November 23, 2011

⁶ CBC New, Ont. wind farm health risks downplayed: documents, September 22, 2011
[http://news.sympatico.cbc.ca/local/on/ont/wind-farm-health-risks-downplayed-document...](http://news.sympatico.cbc.ca/local/on/ont/wind-farm-health-risks-downplayed-document)

⁷ McMurtry, Dr. Robert, Deputation to the Standing Committee on General Government Regarding Bill C-150, April 22, 2009

⁸ Krogh, CME, et al (2011), Wind VOICE, a self-Reporting Survey: Adverse Health Effects, Industrial Wind Turbines and the Need for Vigilance Monitoring, Bulletin of Science Technology & Society 2011 31:334, DOI:10.1177/0270467611412551
<http://bst.sagepub.com/content/31/4/334>

⁹ French Academy of Medicine warns of wind turbine noise, March 2006
<http://kirbymtn.blogspot.com/2006/03/french-academy-of-medicine-warns-of.html>

¹⁰ Harry, Dr. Amanda, Wind Turbines, Noise and Health, February, 2007

¹¹ Hanning, Dr. Christopher, Sleep disturbance and wind turbine noise, November 2010
www.windvigilance.com/...health.../wind-turbine-noise-sleep-and-he...

¹² Pierpont, Nina, Wind Turbine Syndrome
<http://wikibin.org/articles/nina-pierpont.html>

¹³ Japanese Ministry of the Environment, January 19, 2010
www.asahi.com
<http://asahi.com/english/Herald-asahi/TKY201001180410.html>

¹⁴ The Honourable Matthew Guy MLC, Minister for Planning, State of Victoria Government, Australia, Minister announces first steps to restoring fairness for industries and communities on wind farms, March 3, 2011

¹⁵ New South Wales Government, "World's Toughest" Rules proposed for NSW Wind Turbines, December 2011
<http://www.aussierenewables.com.au/news/?p=1914>

¹⁶ Laurie, Dr. Sarah, Waubra Foundation, Explicit Cautionary Notice to Those Responsible for Wind Turbine Siting Decisions, June 29, 2011

¹⁷ The Social and Economic Impact of Rural Wind Farms, June 23, 2011, Community Affairs References Committee,
www.aph.gov.au/senate/committee/clac...wind_farms/.../index.htm

¹⁸ Ambrose, Stephen & Rand, Robert, The Bruce McPherson Infrasound and Low Frequency Noise Study, December 14, 2011, Conclusions, 5.1, P.46
<http://randacoustics.com/wind-turbine-sound/wind-turbines-published-articles/the-bruce-mcpherson-ilfn-study/>

¹⁹ *ibid*, Executive Summary, P. 3

²⁰ *ibid*