

## HEALTH CAN CUT ON THE BIAS: Old Pattern or new design?

Is the proposed Health Canada 'Health Impacts and Exposure to Wind Turbine Noise: Research Design and Noise Exposure Assessment' just meant to iron out some wrinkles for the wind industry as it continues to shred the social fabric of Canada's rural communities and the whole cloth of our Natural and Cultural Heritage? For the reputation of our nation and the well-being of all people we must work for something better.

### NEW DESIGN

Last May saw the launch of Health Canada's MENTAL HEALTH STRATEGY: Changing Directions Changing Lives<sup>1</sup> which states:

“We can and must defeat the stigma that has blighted people’s attitudes for far too long and has fed the discrimination that so many have endured. We can and must ensure that everyone who confronts a mental health problem or illness is able to count on the same support, treatment and services as anyone who is facing a physical health challenge. ***We can and must promote mental health in all walks of life, and do everything possible to reduce people’s risk of developing a mental health problem or illness, or of becoming so desperate as to contemplate suicide.***”  
(emphasis added)

Honourable Leona Aglukkaq, Minister of Health:

“The human cost of mental health problems and illnesses is dramatic and has a significant impact on the health and the economy of our country.”

Commission Chair David Goldbloom, MD:

“Everyone has a role to play and that is why today’s call to action is intended for every government, corporation, organization, community, service provider and Canadian to rally around the goals and priorities in the Strategy.”

Hear, hear! So get on with it; put those fine words into action on this new health study.

Dr. Leventhall, a researcher whose early work in Low Frequency and Infrasound Noise confirmed health effects in *sleeping* children, suggests - now that he is a wind industry expert - that his experimental cognitive behaviour therapy may<sup>2,3</sup> relieve the problems of those suffering from noise exposure, in particular, exposure to low frequency noise<sup>4</sup>. Clearly to Leventhall this is at least partially a mental health issue, though as of March 2011 his therapy had never actually been applied to wind turbine noise<sup>5</sup>. Perhaps the time is now! Let's cut to some of the ways the Industrial Wind Turbine(IWT) situation in Ontario is tailored to harm mental health!

### OLD PATTERN

Mental Health stressors:

1- Bullying:

Zero tolerance in schools however the Ontario government's Green Energy Act, arbitrarily invoked entirely [without proper cost/benefit analysis](#)<sup>6</sup>, [snatches Democracy](#)<sup>7</sup> and [environmental/human rights](#)<sup>8</sup>, forcing industrial wind [energy sprawl](#)<sup>9</sup> on rural municipalities regardless of whether self-image is tied to landscape conservation and stewardship objectives, an assault on self-esteem.

2- Discrimination:

Urban communities such as [Missisauqua](#)<sup>10</sup> and [Oakville](#)<sup>11</sup> can reject efficient gas plants regardless of overall public good whereas rural rights to peaceable enjoyment of property, quiet, and community are quashed for unreliable and [expensive intermittent renewables](#)<sup>12</sup>. Disabled, children, and elderly particularly at risk due to curtailment of benefits in rural retreat to quiet and healthy outdoor activities due to noise pollution, shadow flicker and risk of injury from ice or blade throw and fire with pollution from toxic oil and fumes.

3- Shunning:

Government responds to "consultation" within the Renewable Energy Approval process by ever more "streamlining" alterations to the O.Regs. and Crown Land Act to further suppress the rural voice of objection. Industry-biased ["churnalism"](#)<sup>13</sup>, (Media quotes proponents verbatim, project will power x number of homes... without adding the element of truth... when the wind blows) largely ignores or trivializes the protester. Opposition marginalized by "community organizers" who come into wind targeted towns to assist pro-wind in getting their way over the rest of the community and depict, in a [negative way, those locals who attempt resistance](#)<sup>14</sup>. Isolation due to conflict within family and community leads to [collapse of social support networks](#)<sup>15</sup>.

4- Taunting:

Name-calling practiced and condoned by government and industry leaders, ["NIMBY"](#)<sup>41</sup> "Scaremonger" "Complainer" implying moral deficiency now possibly extending to [DNA checks](#)<sup>16</sup> for electro-sensitivity as genetic abnormality. Mockery of mental states as stemming attributed to jealousy or hysteria in order to stigmatize and silence suffers.

5- Financial loss:

[Direct costs](#)<sup>17</sup> for lawyers, time off, experts and research to protest against expropriation without compensation. Decline in value of [property](#)<sup>18</sup> and overall [economic decline](#)<sup>19</sup> due to high electricity rates all denied by authorities despite available [evidence](#)<sup>20</sup>. Financial planning and careful retirement budgets trashed.

6- Sleep deprivation:

Anxiety, frustration, reduced coping ability, long hours of activism in response to threats or actual intrusion of IWT and [adverse effects](#)<sup>21</sup>.

7- Reality distorted:

[Sham consultations](#)<sup>42</sup> invalidate reason through propaganda and sales-pitch put forth as truth and fact. Rejection of contrary [empirical evidence](#)<sup>43</sup> while debunked computer modelling or projections relentlessly presented without correction. Cognitive dissonance of renewables advocates warps discussion, [eliminates logical argument](#)<sup>48</sup>, leads to ad hominem attacks against concerned citizens and results in the use of the ["end-justifies-means"](#)<sup>44</sup> argument and impasse.

8- Loss of control:

[Trust in government to act wisely and for the public good is nullified](#)<sup>45</sup> while the ability to control one's own destiny is eroded. There is increased need for vigilance against wind developer's "community organizers" or endless Environmental Bill of Rights Registry

postings of concern requiring comment, though often seen as a [futile exercise](#)<sup>46</sup>.

9- Loss of Justice:

Urban based Environmental justice advocates and watchdogs in favour of allegedly "green" energy are unresponsive to the plight of rural residents, leaving them without amply funded legal representation to fight wildlife and habitat threats and for [meaningful access to environmental decision-making as a human right](#)<sup>22</sup>. Unequal burden of proof for adverse health effects. Lack of evidence is accepted as proof of no adverse effect. Yet the [Environmental Review Tribunal](#)<sup>47</sup> (ERT) requires absolute proof the harm *will* be done, proof of *irreversible* harm to the environment<sup>23</sup> and demands personal health records going back 10 years, even though the *direct* effects of IWT though indirect causal pathways are accepted by the World Health Organization. Unreasonably short time limits being set on the ERT process which can easily be foreseen to make a small pool of expert witnesses unavailable to all litigants.

10- Grief:

[Anguish](#)<sup>24</sup> at all-of-the-above and predictable loss of self-worth; with [stressors not even acknowledged](#)<sup>49</sup> in the context of IWT nor proper health care available.

## MEASURING UP TO IMPROVED STANDARDS

Excerpts from MENTAL HEALTH STRATEGY , Changing Directions Changing Lives [strategy.mentalhealthcommission.ca](http://strategy.mentalhealthcommission.ca)<sup>25</sup>

### “Priority 1.1

It is important that we find ways to communicate the connection between mental well-being and economic prosperity, school performance, and physical health and well-being, so that mental health can be promoted in policies and practices in all areas of social and economic life.

People living with mental health problems and illnesses often report that the experience of stigma – from members of the public, from friends, family and co-workers, and even at times from the very service systems that they turn to for help – has a more devastating impact on them than the illness itself.

Reducing stigma is important for changing how people think, but addressing discrimination, upholding rights and eliminating structural barriers are critical for changing how people act.

### PRIORITY 2.3

#### ***Uphold the rights of people living with mental health problems and illnesses.***

Canada's ratification of the United Nations Convention on the Rights of Persons with Disabilities (CRPD) in 2010 provides a new touchstone for legislation, policies, and regulations that affect people living with mental health problems and illnesses. The CRPD is rooted in a social model of disability, a 'paradigm shift' in which ***disability is understood to arise from the ways in which external environments interact with people***, and not just as a result of a person's condition<sup>26</sup>.

As a signatory of the Convention, Canada committed to adopting legislative and other measures as required to ensure that the human rights of all persons with disabilities

are promoted and protected. The Convention highlights the need to implement these protections on a day-to-day basis, by taking steps to eliminate barriers to the full participation of people living with mental health problems and illnesses in schools, workplaces, and other sectors, as well as in communities in general."<sup>27</sup>

The study of IWT noise is complex and rapidly growing more critical due to the declining state of physical and mental health of the victims of Wind Turbine Syndrome (WTS) and the proliferation of IWT in rural areas.

While wind developers continue to use mathematical formulae and theoretical studies to dismiss complaints the plight of real people must be addressed because, as the eminently qualified epidemiologist and epistemologist Carl V. Phillips states:

"... though the failure of models to explain the observed problems does not deny the problems, it does mean that we do not know what, other than kilometers of distance, could sufficiently mitigate the effects. There has been no policy analysis that justifies imposing these effects on local residents. The attempts to deny the evidence cannot be seen as honest scientific disagreement and represent either gross incompetence or intentional bias."<sup>28</sup>

## ALTERATIONS REQUIRED

While the Federal acknowledgment of the information deficit on the adverse health effects of Industrial wind turbines is appreciated, the opportunity to comment on and improve the Health Canada study design is even more welcome.

The beleaguered rural population of Ontario has become well-versed in the chicanery of Big Wind so for Ontario's wind wise and wary citizenry *three challenges to credibility of this study are obvious and must be resolved.*

The most egregious problems may be briefly stated as:

- I. Energy Policy Bias
- II. Chair and researcher bias
- III. Scope limited/bias

Firstly, the new Mental Health Strategy should be invoked to eliminate unsubstantiated [boosterism](#)<sup>29</sup> of Federal energy policy and the prejudice that injects into the Health Canada Study.

The Auditor General for Ontario confirmed our suspicions of Provincial malfeasance when he determined in his [Auditor General for Ontario Report 2011](#)<sup>30</sup>, that there had been no proper cost/benefit analysis to legitimize the Green Energy Act.<sup>31</sup>

Unless the Federal Government can produce the missing scientific proof that IWT are a planet saver, or even a cost effective fossil-fuel saver, the introduction of energy policy into this health study is not just bad form indicating potential bias but it is entirely inappropriate because it re-victimizes those whose mental health has already been sacrificed for the putative benefits of allegedly "green" energy. It must be noted that wind power is *not emissions free*, noise pollution is in fact the subject at hand.

The following might seem at first glance to apply to Health Canada conducting this study :

"But while turbine neighbours are happy to hear a sound study is on the way, they say they are concerned the work will be done not by the state but by a quasi-public agency

whose focus is the promotion and development of renewable-energy projects...

“This sound study is being done in response to real, legitimate complaints from residents about existing turbines,” said Country Club Way resident Tim Dwyer, a member of Kingston Wind Aware, a citizens group lobbying to shut down the local turbines until a new permit review process is conducted. ***“I’m surprised that the entity chosen to make the sound assessment is an agency created to promote clean energy like wind turbines.”*** (emphasis added)<sup>32</sup>

[Political interference](#)<sup>33</sup>, ideological tampering, and perhaps [incompetence](#)<sup>34</sup>, have resulted in the [ethical unravelling](#)<sup>35</sup> of other investigations and testimony fraying the scientific reputations of states and nations involved in fabricating those IWT health reports.

Hopefully Canada will demonstrate greater integrity and leadership than did the United Kingdom when it commissioned Hayes McKenzie Partnership (HMP) to do a study of wind farms in the UK and then concealed their findings. A Freedom of Information applications made in 2009 revealed that:

“Civil servants have suppressed warnings that wind turbines can generate noise damaging people’s health for several square miles around. The guidance from consultants indicated that the sound level permitted from spinning blades and gearboxes had been set so high – 43 decibels – that local people could be disturbed whenever the wind blew hard. The noise was also thought likely to disrupt sleep. The report said the best way to protect locals was to cut the maximum permitted noise to 38 decibels, or 33 decibels if the machines created discernible “beating” noises as they spun. It has now emerged that officials removed the warnings from the draft report in 2006 by Hayes McKenzie Partnership (HMP), the consultants. The final version made no mention of them.”<sup>36</sup>

Secondly, the appointment of individuals, who appear to have a prejudice, to lead this project is both insensitive and disrespectful of the population to be studied. There must be careful attention given to the design of the study so that it can overcome the immediate shrinking of trust from the choice of David S. Michaud as chairman.

"A Justification for Using 45 dBA Sound Level Criterion for Wind Turbine Projects"<sup>37</sup> authored by Stephen E. Keith, David S. Michaud, and Stephen H. P. Bly 2008 would seem to support the status quo.

Thirdly, the scope of the study does not acknowledge the full extent to which the old pattern of mental health stressors mentioned above have impinged on the well-being of rural Canadians. To again quote Honourable Leona Aglukkaq, Minister of Health:

“The human cost of mental health problems and illnesses is dramatic and has a significant impact on the health and the economy of our country.”

## NAKED TRUTH

In oral testimony to the Senate inquiry on 31 March 2011, the CEO of the National Health and Medical Research Council, Professor Warwick Anderson, said,

“... We are at pains to point out that we believe a precautionary approach should be taken to this because, as you would understand, the absence of evidence does not mean that there might not be evidence in the future.”

It is sincerely to be hoped that Canada can reinforce the existing body of high-quality knowledge with work which will be respected for its integrity and scientific rigour. Such scientific endeavour will stand the test of time and be of service to all humanity.

In order to compensate for the perception of bias and respecting Canada's Mental Health Strategy the study should:

- Be **be conducted by the Canadian Institutes of Health Research**, not by Health Canada (2) and any mention or influence of energy policy directives be removed.
- *Appoint as co-chair Carmen Krogh*, formerly of Health Canada, who is internationally known and respected by IWT victims.
- **2.3 Research design**  
The sample size of 2000 dwellings truly randomly selected from those located near 8 to 12 IWT installations risks a statistical bias toward those unaffected and given the Section 1.2 WIND TURBINE NOISE factors influencing the level of noise at the receptor, the type of IWT, the distance from the WT, intervening structures, the existing background sound levels, wind speed and direction, topography, meteorological conditions, add to which the *number of turbines*, selection should be larger than 2000 and weighted so as to eliminate the 'distance-from-turbine' bias.
- Scope should include *evaluation and remediation* for the full range of mental health stressors to which the rural populations have been subjected.
- The list of international advisors should be expanded to include those with the most current research and expertise in the full complex of adverse health effects from IWT to ensure the most efficient use of the limited time allotted for this study, see Appendix A.
- The results of the study must be presented as a paper for *open peer-review and audit* prior to publication.
- The aim should be to reach a conclusion which INFORMS (NOT *supports* as stated in section 3 of [http://www.hc-sc.gc.ca/ewh-semt/consult/2012/wind\\_turbine-eoliennes/research\\_recherche-eng.phpt](http://www.hc-sc.gc.ca/ewh-semt/consult/2012/wind_turbine-eoliennes/research_recherche-eng.phpt))
- **3 Conclusions**  
The research study to be undertaken by Health Canada will support the Government and other stakeholders by strengthening the evidence base that supports decisions, advice and policies regarding WT development proposals, installations and operations in Canada.

[The Chief Medical Officer Of Health Report \(2010\)](#)<sup>50</sup>, a stitch-up of literature widely used by wind developers to claim no adverse health effects from turbines, was such a political patchwork that suppressed material from the government consultant literature review referenced actually warned:

“The audible sound from wind turbines, at the levels experienced at typical receptor distances in Ontario, is nonetheless expected to result in a non-trivial percentage of persons being highly annoyed. As with sounds from many sources, research has shown that annoyance associated with sound from wind turbines can be expected to contribute to stress related health impacts in some persons.”<sup>38</sup>

“Stress symptoms associated with noise annoyance, and in particular low frequency annoyance include sleep interference, headaches, poor concentration, mood swings”<sup>39</sup>

“Since it is evident that complaints related to low frequency noise from wind turbines often arise from the characteristics of the sound impact indoors, and since the indoor low frequency sound levels and frequency spectra can differ markedly from those outdoors, it is recommended that the MOE consider adopting or developing a protocol to provide guidance for addressing such complaints.”<sup>40</sup>

Such an disgraceful and inhumane betrayal of public trust and the public good as illustrated by the Ontario government must *never* be repeated in our nation.

Given the clear need for implementation of the Precautionary Principle, as endorsed by the World Health Organization and based on the recent peer-reviewed scientific advances published by [Dr. Alec Salt](#)<sup>51</sup>, the Canada Wind Turbine Noise and Health Study Design should establish standards and protocols by which the population may be protected from the effects of Industrial Wind Turbines. Furthermore these precautionary standards and protocols should specify metrics and methods with which Low-frequency/Infrasound noise from Industrial Wind Turbines may be accurately assessed in order to determine whether such emissions from industrial Wind Generating Stations poses any health risk to those unfortunate enough to live nearby. Additionally, in the absence of dire electricity shortages it is further recommended that there should be a *nation-wide freeze on all IWT developments until this study is completed, results published and remediation and compensation in place.*

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## **Appendix A**

List of some of the published peer reviewed experts on Wind Turbine Syndrome that the study must include:

Dr. Robert McMurtry, M.D., F.R.C.S. (C), F.A.C.S., Canada,

Carmen Krogh, BSc Pharm, Researcher Wind Turbines: Adverse Health and Social Justice, Canada,

Mr Stephen Ambrose, Acoustician, USA,

Dr. Jeffery Aramini, PhD, Epidemiologist, Canada,

Dr Arline Bronzaft, PhD, Noise and Health Specialist, USA,

Dr Steven Cooper, ENG Fellow Australian Acoustical Society and Member of Institute of Noise Control, USA ,

Professor Phillip Dickinson, Acoustician, New Zealand,

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Peter J. Haddon, BSc, FRICS, Scotland,

Dr Christopher Hanning, BSc, MB, BS, MRCS, LRCS, LRCP, FRCA, MD, Sleep Disturbance and Wind Turbines, UK,

Professor Colin Hansen, Acoustician, Australia,

Dr Magda Havas, BSc, PhD, Biological and Health Effects of Electromagnetic and Chemical Pollution, Canada,

Richard James,

Dr Mauri Johansson, Specialist in Community Health and Occupational Medicine, Denmark, INCE Acoustician, USA,

Dr. Sarah Laurie, CEO Waubra Foundation, Australia,

Dr. Henrik Moeller, Acoustic Specialist, Denmark,

Dr. Michael Nissenbaum, M.D., USA,

Dr. Carl Phillips, PhD, M.P.P.,

Dr. Nina Pierpont, Author of Wind Turbine Syndrome,

Mr. Robert Rand, Acoustician, Australia, USA,

Dr. Daniel Shepherd, PhD, Noise and Health Specialist, New Zealand,

Dr Malcolm Swinbanks, Acoustician, UK,

Dr. Robert Thorne, PhD, Health Sciences and Acoustics, Australia.