

Please acknowledge receipt of this letter.

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June 15, 2016

Copy sent by mail

Dear Prime Minister Justin Trudeau, Minister Dr. Jane Philpott, Assoc. Deputy Minister Paul Glover;

Re: Open Letter - Industry compliance with Radiation Emitting Devices Act (REDA) and wind turbine investigation

The purpose of this letter is to formally request a meeting with the Minister of Health and staff to discuss compliance by the wind turbine industry with the Radiation Emitting Devices Act and wind turbine industry compliance obligations, and the need to conduct an investigation of complaints relating thereto.

We have included Associate Deputy Minister Glover in this letter because he met with Dr. Robert McMurtry, F.R.C.S.(C), F.A.C.S. and researchers Carmen Krogh, BSc Pharm and Beth Harrington, BMus in July 2009 where he was made aware of the suffering that was already taking place in rural Ontario as a result of wind turbine installations.

Your Government has committed to listen to the people of Canada with respect to climate change. Mr. Trudeau's Open Letter to Canadians dated November 4, 2015 states: "Our country faces many real and immediate challenges – from a struggling middle class to the threat of climate change. If we are to overcome these obstacles, Canadians need to have faith in their government's honesty and willingness to listen. That is why we committed to set a higher bar for openness and transparency in Ottawa." [1]

We wish to take this opportunity to help you realize a safe approach to your climate change goals.

During the past eight years, the steady expansion of industrial wind technology as a source of clean energy for Canadians has resulted in adverse health events in affected communities in Canada. [2,3]

Many in Ontario and elsewhere have logged serious health complaints with proponents/operators of wind turbine projects, provincial and federal government ministries as well as wind turbine manufacturers. These serious health complaints are a result of the harmful acoustical waves and radio/electromagnetic energy emitted by industrial wind turbines which are located in proximity to homes. As previous ministers and current Minister Philpott have been informed, the adverse effects of wind turbines are not trivial.

HEALTH CANADA'S WIND TURBINE NOISE AND HEALTH STUDY DESIGN

Health Canada's wind turbine noise and health [WTNH] study Design 2012 states: "The study will be conducted on a sample of 2000 dwellings randomly selected from those located near 8 to 12 WT installations in Canada." [4] [Emphasis added]

Some parents and commentators have advised Health Canada about their concerns for their children. Yet Health Canada excluded children under 18 in its WTNH study. [5] This exclusion has resulted in an unassessed cluster of a vulnerable young population.

As a result of the random selection process, we also note that 93 homes where elderly members of the community lived, were coded "out of scope" because the study subject was over 79 years of age. Despite the fact that it is recognized Canada has an aging population, this vulnerable population cluster was also not assessed. [6]

In addition, it appears that Health Canada's WTNH study did not establish pre-turbine baseline objective measurements to be compared with the measurements taken during the study. Indicators such as cortisol, blood pressure and highly disruptive sleep patterns (HDS) before and after exposure to wind turbines are crucial to assessing true health outcomes. The study design could have included objective measurements in zones where wind turbines were operating, removing the individual(s) from wind turbine exposure for a period of time (30 days or more), followed by a reassessment of the complainant upon return.

We question why Health Canada - when it had the opportunity - did not conduct individual investigations of the actual complaints rather than a stated randomized epidemiological study of a broad population while excluding children under 18 and the elderly over 79. Investigations of specific complaints are far more revealing than randomized selection. The Government of Canada had been made aware of the health issues. During the study design phase those raising health issues were not given the opportunity to be represented on the design committee in order to share collective knowledge and expertise about living with IWTs on a daily basis. During the comments phase, requests to be included in the research were dismissed by Health Canada on the basis that these individuals could be considered biased.

HEALTH CANADA'S WTNH STUDY

The study was a stated cross-sectional randomized epidemiological study under the former government and it concluded revealed that high annoyance as a result of wind turbine emissions was "statistically significant". [7]

High community annoyance leads to a myriad of health outcomes including stress related symptoms such as chronic sleep disturbance, elevated blood pressure, cardiac events and depression. This is expressed in the WHO Lares study which studied the effects of noise on children:

One of the main conclusions of this work is that for noise induced sleep disturbances, traffic noise annoyance and neighbourhood noise annoyance, the identified health effects are independent of socioeconomic status and housing conditions. The elevated relative risks are expressed in the cardiovascular system, the respiratory system and the musculoskeletal system, as well as through depression. [8] [Emphasis added]

Lares also states:

Annoyance is defined as a feeling of discomfort which is related to adverse influencing of an individual or a group by any substances or circumstances. Annoyance express itself e. g. by malaise, fear, threat, trouble, uncertainty restricted liberty experience, excitability or defencelessness. With chronically strong annoyance a causal chain may exist between the three steps health - annoyance – disease.

The World Health Organizations comments on children and their vulnerability to noise:

VULNERABLE GROUPS OF CHILDREN

The fetus and babies

Preterm, low birth weight and small for gestational age babies

Children with dyslexia and hyperactivity

Children on ototoxic medication [9]

And that:

Children, noise and health

Impairment of early childhood development and education caused by noise may have lifelong effects on academic achievement and health. Studies and statistics on the effects of chronic exposure to aircraft noise on children have found:

Consistent evidence that noise exposure harms cognitive performance; consistent association with impaired well-being and motivation to a slightly more limited extent; moderate evidence of effects on blood pressure and catecholamine hormone secretion [10]

RADIATION EMITTING DEVICES ACT

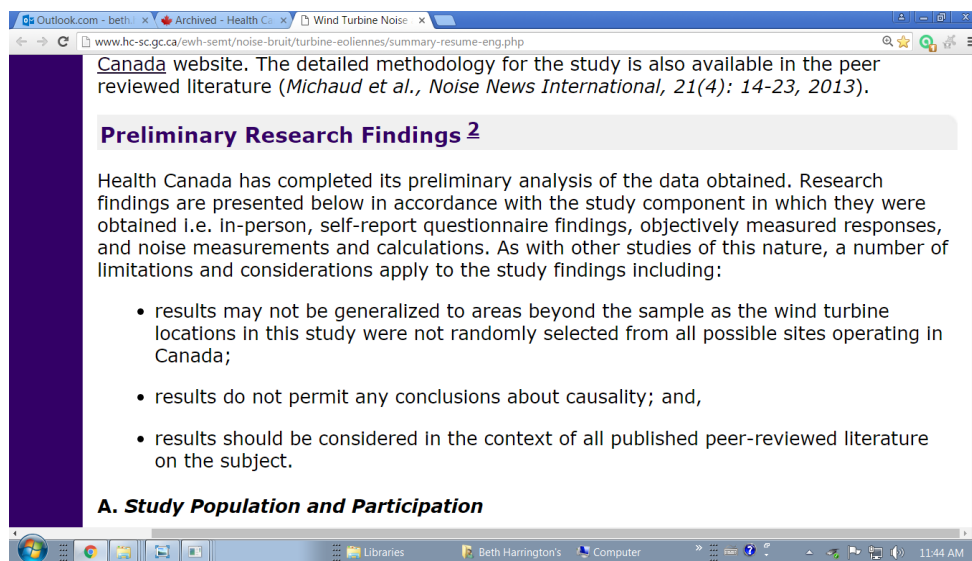
In 2014 Health Canada's WTNH study Principle Investigator Dr. David Michaud testified under oath during an Ontario Environmental Tribunal Review appeal of a renewable energy approval of a wind project. During testimony he stated that Health Canada's *Consumer and Clinical Radiation Protection Bureau* is the authority under which Health Canada's WTNH study was conducted. Dr. Michaud also confirmed industrial wind turbines fall under the Radiation Emitting Devices Act. [11]

Consumer and Clinical Radiation Protection Bureau (CCRPB)

The Consumer and Clinical Radiation Protection Bureau is responsible for the administration of the *Radiation Emitting Devices Act*, which addresses radiation safety issues for X-ray and non-ionizing radiation devices. The *Act* covers devices used in consumer and industrial applications, as well as medical devices.

CCRPB assesses, monitors and assists in the reduction of the health and safety risks associated with radiation exposure from devices, undertakes research into the biological effects of ionizing and non-ionizing radiation, develops guidelines, standards and safety codes, provides radiation safety inspections of federally-regulated facilities containing radiation-emitting devices, and provides advice on potential health impacts of sources of environmental noise. The Bureau also provides radiation protection and safety advice to other federal departments, such as Industry Canada, Transport Canada, Solicitor General, the Labour Programme of Human Resources and Social Development Canada, etc., in support of their mandated activities. [12]

Though Health Canada's WTNH study was called a randomized epidemiology study, Health Canada's preliminary results state something different and clarified that results cannot be generalized beyond the sample locations studied. [13]



The Radiation Emitting Devices Act [REDA] is the federal law under which Health Canada's approximately \$2.2m research was conducted. The REDA specifically states that radiation is a form of acoustical waves.

The REDA states:

6. (1) Where a person who is the manufacturer or importer of a radiation emitting device becomes aware, after the device has left the person's premises, of the fact that the device
 - (a) does not comply with the standards, if any, prescribed under paragraph 13(1)(b) and applicable thereto, or

- (b) creates a risk to any person of genetic or personal injury, impairment of health or death from radiation by reason of the fact that it
 - (i) does not perform according to the performance characteristics claimed for it,
 - (ii) does not accomplish its claimed purpose, or (iii) emits radiation that is not necessary in order for it to accomplish its claimed purpose, the person shall forthwith notify the Minister. [14]

The REDA states the device [wind turbine] must comply with the standards prescribed and that the Minister is to be notified of non-compliance or defect and may investigate. However according to Access to Information and Privacy [ATIP] requests of at least 10 wind projects, not one importer/proponent/operator or manufacturer has reported complaints to the Minister from the population as required by the REDA.

Some reporting health complaints have been notified by the Minister of Health, Canada that there are presently no standards for wind turbines. This seems highly irregular considering the rising number of wind projects in the past 8 years and the ever increasing number of complaints.

The Standards Council of Canada SCC the CAN/CSA-IEC 61400-11:13 **Wind turbines** — Part 11: Acoustic noise measurement techniques (IEC 61400-11:2012, IDT) claims:

Through the collaborative efforts of Canadian standardization network members, standardization is **helping to advance the social and economic well-being of Canada and to safeguard the health and safety of Canadians**. The network's efforts are overseen by SCC. The principal objectives of SCC are to foster and promote voluntary standardization as a means of advancing the national economy, supporting sustainable development, benefiting the health, safety and welfare of workers and the public, assisting and protecting the consumer, facilitating domestic and international trade, and furthering international cooperation in relation to standardization. [Emphasis added]

HEALTH INVESTIGATION

Exposure to wind energy installations has been imposed without consent on many rural residents including those who have signed this letter. Chronic exposure without remedy to the emissions from wind turbines has caused a deleterious loss of well-being and damage to health and safety.

When it comes to industrial wind turbines, federal and provincial authorities have a poor track record in protecting our physical and mental health, social well-being and safety.

We therefore want investigations of each of our situations through patient-oriented research such as is provided by Health Canada under the SPOR Strategy for Patient-Oriented Research.

Canada's Strategy for Patient-Oriented Research (SPOR) is about ensuring that the right patient receives the right intervention at the right time.

Patient-oriented research refers to a continuum of research that engages patients as partners, focusses on patient-identified priorities and improves patient outcomes. This research,

conducted by multidisciplinary teams in partnership with relevant stakeholders, aims to apply the knowledge generated to improve healthcare systems and practices. [15]

Last December Dr. Philpott dedicated \$12.5 million to the Chronic Pain Network.

Patient-oriented research refers to investigation that engages patients as partners, puts a focus on patient-identified priorities and improves patient outcomes. This research, conducted by multidisciplinary teams in partnership with relevant participants, aims to apply the knowledge produced to improve healthcare systems and practices. [16]

On March 31 2016, \$12.5 million was granted to McMaster for research on patient oriented research. It reiterated the role of patient oriented investigative research that focuses on individual patients.

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On May 2, 2016 Dr. Philpott granted \$2 million to University of Toronto to investigate environmental factors' impacts on health. Again, the focus is on investigation.

Four researchers at the University of Toronto and its affiliated research centres are receiving \$2-million each to investigate how environmental factors can impact health. The funding from the Canadian Institutes of Health Research was announced today by federal health minister, the Honourable Jane Philpott. [18]

These grants support the benefit of investigating how environmental factors impact patient outcomes which wind turbine-affected communities did not receive through Health Canada's WTNH study.

We request a meeting with you, Minister Philpott and your staff to hear our concerns and adverse effect complaints first-hand. Continuing to support more wind projects in proximity to homes, will likely result in an increase of affected families, including children and the elderly.

Thank you for your time and attention to this urgent matter. In the new spirit of "willingness to listen" we look forward to scheduling a meeting with you and representatives who have researched and expressed concern on this matter and with representation of those who have signed this letter.

Most sincerely,

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On behalf of:

Andrew, Bill

Andrew, Suzanne

Armstrong, Kay
Ashbee, Barbara
Bartlett, Susan
Beaudry, Patricia Bond
Beaudry, Raymond
Black, Joan
Black, John
Brindley, Darlene
Brindley, Ross
Broniek, Denise
Broniek, Ethan
Broniek, Marlo
Broniek, Robert
Chechovsky, Jeanne
Commaert, Melissa
Correia, Joe
Correia, Joey
Correia, Shellie
Crawley, Paulette
DeHaan, Claudia
DeHaan, Dave
DeHaan, Nellie
DeHaan, Peter
DeHaan, Steve
Docken, Derwin
Drennan, Patricia
Drennan, Shawn
Ducharme, Doug

Eadie, Anne
Eadie, Doug
Engel, Ann
Engel, Ed
Ernst, Pam
Foster, Helen
Foster, Jessica
Foster, Rachel
Fraser, Sandy
Frayne, Anita
Frayne, Paul
George, Bob
Gillis, Peter
Gillis, Lorrie
Gorman, Barbara
Groves, Linda
Groves, Steve
Hartman, Jason
Hartman, Melanie
Haygarth, Lynn
Hayward, Martina
Horton, Gerry
Horton, Nikki
Horton, Owen
Horton, Wyatt
Howard, Anne Marie
Hughes, Debbie
Huneniuk, Christina

Hunter, Karen
Jelinski, Eric PEng
Kay, Elizabeth
Kay, Malcolm
Kellar, Patti
Kelly, Ann
Kelly, Charlie
Kelly, John
Kirby, Philip
Krane, Jame
Krane, Jean
Krane, Michael
Krane, Nora
Krane, Sylvia
Krane, William P.
Lamb, Kevin
Leitch, Mike
Lewand, Chuck
Lewand, Robbie
Libby, David
Lindsay, Aaron
Lindsay, Gary
Lindsay, Lyndsay
Lindsay, Lynn
Lormand, Dennis
MacKinnon, Agnes
MacKinnon, George
MacLeod, Eric

MacLeod, J. Stewart
MacLeod, Peter
MacLeod, Sandy
Maidment, Floyd
Marshall, Ernie (deceased)
Martin, David
Martin, Judy
McComb, Carter
McComb, Colton
McComb, Lora
McComb, Scott
McComb, Sienna
McNeilly, Anne
Melady, Jeanne
Melady, June Anne
Melick, Bill
Metzger, Bridget
Metzger, Marc
Metzger, Martin
Metzger, Matt
Metzger, Monika
Metzger, Sabrina
Miller, Stephen
Muller, Matt
Muller, Michael
Muller, Michelle
Muller, Suzanne
Nernberg, Clarence

Nolan, Dan
Nolan, Rhonda
Ogilvy, Lyn
Pauchuk, Cheryl
Pauchuk, Leane
Pauchuk, Michele
Pentland, Emma,
Pentland, Eugenia
Pentland, George
Pentland, Isabelle
Pentland, Opal
Pentland, Paul
Pentland, Pearl
Pentland, Queenie
Pentland, Rosemary
Portz, Bernd
Portz, Ursula
Reist, Marilyn
Reist, Wayne
Rogers, Linda
Rogers, William
Ryan, Gerry
Ryan, Karen
Schmalz, Elaine
Schmalz, Greg
Schmalz, Kelly
Schmalz, Kimberly
Schmalz, Kristen

Schmidt, Norma
Schmidt, Ron
Scholman, Hope
Scholman, Lisa
Scholman, Marisa
Seeliger, Bert
Seeliger, Virginia
Small, David
Smith, Trix
Sommer, Pauli
Sprott, Heather
Sprott, Robin
St. Armand, Doris
Stachura, Carla
Stachura, Mike
Stauttner, Ruth
Steep, Andrew
Steep, Claire
Steep, David
Steep, Marian
Steep, Paul
Steep, Shawn
Stelling, Keith
Stewart-Love, Virginia
Thompson, Rachel
Van Den Bosch, Len
Van Ooteghem, Aaron
Wallis, Barbara

Whitmore, Bruce
Whitmore, Margaret
Whitworth, Ted
Whitworth, Tracey
Wyls, Brenda
Wyls, Glen
Wyls, Kent
Wyls, Kiera
Zinkan, Peter
Zinkan, Ruthann

We also mourn the loss of those who reported adverse effects since 2008 but are no longer with us:

Basser, Barbara
Basser, Louis
Colling, David
Marshall, Ernie
Wyls, Brenda

REFERENCES

1. Prime Minister Justin Trudeau's open letter to Canadians (4 November 2015) <http://pm.gc.ca/eng/news/prime-minister-justin-trudeaus-open-letter-canadians#sthash.CbEutQbQ.dpuf>
2. Roy D. Jeffery, Carmen M.E. Krogh, and Brett Horner, Industrial wind turbines and adverse health effects Can J Rural Med 2014;19(1) <http://www.ncbi.nlm.nih.gov/pubmed/24398354>
3. Robert Y McMurtry and Carmen ME Krogh, Diagnostic criteria for adverse health effects in the environs of wind turbines PMID: 25383200 [PubMed] PMCID: PMC4221978 <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4221978/>
4. Health Impacts and Exposure to Wind Turbine Noise: Research Design and Noise Exposure Assessment. http://www.hc-sc.gc.ca/ewh-semt/consult/2012/wind_turbine-eoliennes/research_recherche-eng.php
5. Health Canada Environmental and Workplace Health, Frequently Asked Questions November 6, 2014 <http://www.hc-sc.gc.ca/ewh-semt/noise-bruit/turbine-eoliennes/faq-eng.php>

6. Michaud D et al. Exposure to wind turbine noise: Perceptual responses and reported health effects. J. Acoust. Soc. Am. 139 (3), March 2016
7. Health Canada: Summary of results <http://www.hc-sc.gc.ca/ewh-semt/noise-bruit/turbine-eoliennes/summary-resume-eng.php>
8. World Health Organization. LARES Final report Noise effects and morbidity By: Dr Hildegard Niemann / Dr Christian Maschke Interdisciplinary research network. Noise and Health 2004
http://www.euro.who.int/_data/assets/pdf_file/0015/105144/WHO_Lares.pdf
9. World Health Organization, Children and Noise, Children's Health and the Environment, WHO Training Package for the Health Sector www.who.int/ceh
10. World Health Organization, Noise Facts and Figures, Sited December 23, 2012,
<http://www.euro.who.int/en/what-we-do/health-topics/environment-and-health/noise/facts-and-figures>
11. ERT Case Nos. 13-084/13-085/13-086/13-087/13-088/13-089. Ontario Environmental Review Tribunal. Ryan Dixon v MOE. Transcript Dr. David Michaud, October 4, 2013 p. 17
12. Health Canada. Environmental and Radiation Health Sciences Directorate (ERHSD) Date Modified: 2007-03-28.
<http://www.hc-sc.gc.ca/ahc-asc/branch-dirgen/hecs-dgseec/erhsd-dsser/index-eng.php>
13. Health Canada: Summary of results <http://www.hc-sc.gc.ca/ewh-semt/noise-bruit/turbine-eoliennes/summary-resume-eng.php>
14. Radiation Emitting Devices Act (R.S.C., 1985, c. R-1) Act current to 2016-05-12 and last amended on 2004-10-13
<http://laws-lois.justice.gc.ca/eng/acts/R-1/>
15. Government of Canada. Canadian Institutes of Health. Research Strategy for Patient-Oriented Research (Jan 28, 2016) <http://www.cihr-irsc.gc.ca/e/41204.html>
16. Government of Canada. Canadian Institutes of Health. Research Pain BC partners in launching national pain research network March 31, 2016 <https://www.painbc.ca/news/pain-bc-partners-launching-national-pain-research-network>
17. McMaster University Faculty of Health Sciences. McMaster captures two national patient-oriented research networks worth \$25M. Published: March 31, 2016
http://fhs.mcmaster.ca/main/news/news_2016/chronic_disease_research_announcement.html
18. Government of Canada. Canadian Institutes of Health. U of T news. U of T researchers to investigate environment's health impact April 29, 2016. <https://www.utoronto.ca/news/u-t-researchers-investigate-environment-health-impact>