

Amended version with date correction and minor typos

February 11, 2013

The Right Honourable Stephen Harper
Prime Minister of Canada
pm@pm.gc.ca

The Honourable Leona Aglukkaq
Minister of Health
minister_ministre@hc-sc.gc.ca

Copy:

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Ms Cheryl Gallant, MP
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Open letter to The Right Honourable Stephen Harper, Prime Minister of Canada and Minister Aglukkaq regarding “conclusively demonstrated” health effects from exposure to wind turbine noise

Dear Prime Minister Stephen Harper and Minister Aglukkaq,

I am a published peer reviewed author on the subject of wind turbines and health effects. I am writing to you about the Health Canada Wind Turbine Noise and Health Study team apparent failure to provide full disclosure of the “health effect conclusively demonstrated” from exposure to wind turbine noise.

In his 2005 peer reviewed article, *Noise annoyance in Canada*, Health Canada’s Dr. David Michaud acknowledges the WHO defines health as "a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity" stating:

“According to the World Health Organization (WHO), health should be regarded as "a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity" (World Health Organization 2001). Under this broad definition, noise induced annoyance is an adverse health effect.”¹

Canada continues to support the WHO definition of health. An excerpt from a July 11, 2012 correspondence from David Butler-Jones of The Public Health Agency of Canada states:

Public Health Agency of Canada / Agence de la santé publique du Canada
Chief Public Health Officer / Administrateur en chef de la santé publique

JUL 11 2012

Canada, including both Health Canada and the Public Health Agency of Canada, continues to support the definition of health established by the WHO's constitution in 1948: Health is "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."

Sincerely,



David Butler-Jones, MD
MHS, CCFP, FRCPC, FACPM

Canada

The following 2010 Health Canada document is "Published by authority of the Minister of Health." ² and states:



**Useful Information
for
Environmental
Assessments**

"Health Canada considers the following noise-induced endpoints as health effects: noise-induced hearing loss, sleep disturbance, interference with speech comprehension, complaints, and change in percent highly annoyed (%HA)." ³

In February 2009 Stephen Bly, Chief, Acoustics Division Consumer and Clinical Radiation Protection Bureau Health Canada formally provided advice to me stating:

"The Acoustics Division's current assessment of the scientific literature on wind turbine noise and health is that the only health effect conclusively demonstrated to date is an increase in annoyance and complaints." ⁴

In a June 30 2009 letter Honourable Rona Ambrose, states:

"Health Canada provides advice on the health effect of noise and low-frequency electric and magnetic fields from proposed wind turbine projects, particularly for environmental assessments done under the Canadian Environmental Assessment Act. To date, their examination of the scientific literature on wind turbine noise is that the only health effect conclusively demonstrated from exposure to wind turbine noise is an increase of self-reported general annoyance and complaints (i.e., headaches, nausea, tinnitus, vertigo)." ⁵


Honourable Rona Ambrose, P.C., M.P.
Honorable Rona Ambrose, C.P., députée
Member of Parliament for Etobicoke – Centre Oakes / Membre du Parlement
Minister of Health / Ministre de la Santé

JUL 30 2009

Carman Singh Pharm

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Any errors or omissions are unintended

In 2009, The American Wind Energy Association and The Canadian Wind Energy Association “...established a scientific advisory panel ...”⁶ and funded a literature review, Colby et al. (2009).

Wind Turbine Sound and
Health Effects
An Expert Panel Review

Prepared by (in alphabetical order):

W. David Colby, M.D.
Robert Doble, M.D.
Geoff Leventhal, Ph.D.
David M. Lipscomb, Ph.D.
Robert J. McCunney, M.D.
Michael T. Seilo, Ph.D.
Bo Sondergaard, M.Sc.

Prepared for:

American Wind Energy Association
and
Canadian Wind Energy Association

December 2009

The authors of Colby et al. (2009) discuss Dr. Pierpont’s case series study (which includes Canadian participants), and acknowledge wind turbine symptoms documented by Dr. Pierpont. Colby et al. (2009) found that symptoms such as headaches, nausea, tinnitus, vertigo “... are not new and have been published previously in the context of “annoyance” ...” and are the “... well-known stress effects of exposure to noise ...”⁷

In December 2011 the Ontario Ministry of Environment released a report prepared by then Canadian Wind Energy Association member,⁸ HGC Engineering.



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LOW FREQUENCY NOISE AND INFRASOUND
ASSOCIATED WITH WIND TURBINE GENERATOR SYSTEMS
A LITERATURE REVIEW

Ontario Ministry of the Environment RFP No. OSS-07805

Ontario Ministry of the Environment
226 College Avenue West, Floor 12
Toronto, ON M5V 1E5

SUBMITTED BY:
HGC Engineering Group Limited
HGC Engineering
2880 Argente Road, P.O. Box 1, Suite 203
Mississauga, ON L5N 1P7

Brian Hume, MSc, MBA, P.Eng.
Principal

December 10, 2010

The Ontario Ministry of Environment reports “... three experts in the field of noise, vibration and acoustics reviewed and validated the report”⁹

HGC (2010) states in the conclusions:

“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.”¹⁰

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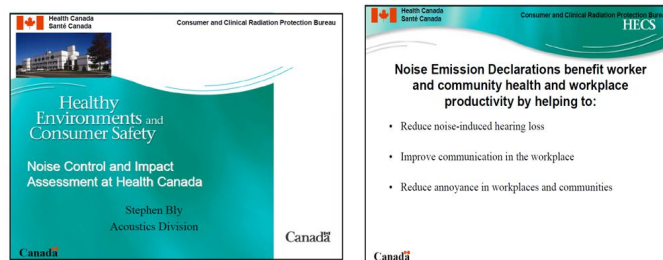
Wind turbines are typically installed in quiet Canadian rural communities. According to the findings of a Health Canada study noise annoyance in rural Canada is demonstrated to be extremely low. Based on Michaud et al. (2005)¹¹ PWC Consulting (PWC Consulting, 2002)¹² and IBM Business Consulting Services (IBM, 2002),¹³ it was found that for Canadian communities with populations less than 5000 approximately 70.1 % of the sample indicated they were they “not at all annoyed” by noise outside their home.

Health Canada’s web site states:



Preventing and reducing noise induced annoyance is a widely accepted health promotion strategy.¹⁴ Preventing annoyance from noise (unwanted sound) will undoubtedly help “Canadians maintain and improve their health while respecting individual choices and circumstances”.

The 2004 Health Canada presentation below, acknowledges community health benefits from a reduction in annoyance.



I have not found credible references which demonstrate that the health of Canadians is maintained and improved by increasing the percentage of highly annoyed individuals.

Instead of maintaining and improving the health of Canadians, members of Health Canada’s Acoustics Division propose increasing the percentage of Canadians highly annoyed by wind turbine noise. The Health Canada authors of Keith et al. (n.d.)¹⁵ Keith et al. (2007)¹⁶ and Keith et al. (2008)¹⁷ propose a 45dBA wind turbine sound limit and predict an increase in the percentage highly annoyed from exposure to wind turbine noise. The Health Canada authors do not base their annoyance predictions on dose response data for wind turbines.

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Based on dose response data for wind turbines Health Canada Study Team Member, Sabine Janssen, reports with a highest allowed immission level of 45 dB(A) it could be expected that "... less than 14% of the exposed population to be highly annoyed indoors by wind turbines and less than 29% to be highly annoyed outdoors."¹⁸

To summarize:

- In 2009 Health Canada examined the scientific literature on wind turbine noise and determined the health effect "conclusively demonstrated" from exposure to wind turbine noise is an increase of self-reported general annoyance and complaints (i.e., headaches, nausea, tinnitus, vertigo).
- Members of Health Canada's acoustics division propose wind turbine sound levels of 45dBA and predict an increase in the percentage of Canadians highly annoyed.
- Based on peer reviewed studies wind turbine sound pressure levels of 45 dBA will result in a non-trivial percentage of persons can be expected to be highly annoyed. The sound from wind turbines can be expected to contribute to stress related health impacts in some persons.

Despite these acknowledgements the Nova Scotia Minister of the Environment indicated in 2012 Health Canada has provided information that wind turbines are safe from a human health perspective.

Sent: Wednesday, August 01, 2012 2:18 PM
To: cheryllk@eastlink.ca
Subject: Your 16 July, 2012, e-mail to the Minister of Environment

As a province, we will be closely monitoring this research. Based on the information we have today from the experts and Health Canada and our colleagues at the Nova Scotia Department of Health and Wellness, wind turbines are safe from a human health perspective. That being said, we will consider the study results in consultation with our health colleagues when they become available.

From a public health perspective, it is also important to consider our alternative sources of energy, including our use of carbon-based fuels. From a population health perspective, renewable energy sources are much healthier overall for public health and the environment.

Original signed by

Sterling Belliveau
Minister

Furthermore it appears that in 2012 Health Canada continues to support a 45 dBA noise level.

Sent: Monday, May 14, 2012 11:06 AM
To: CheryllK

I have been enquiring about the availability of equipment for low frequency monitoring in Halifax. I have been advised by the Environmental Assessment Branch (EA) who issued the approval to SPOTT that monitoring is currently underway and Health Canada's 45 dba noise level would be conservative enough to account for low frequency noise. The results of this monitoring will be forwarded to Health Canada for analysis.

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The Canadian Wind Energy Association (CanWEA) is an industry trade association and lobby organization (See appendix). CanWEA has a target that 20 percent of Canada’s electricity be from wind energy by 2025.



CanWEA calls on federal and provincial governments to collaborate on an action plan that will put Canada on the road to generating 20 percent of our electricity from wind by 2025. Intergovernmental co-operation is essential to create the regional synergies required to maximize Canada's wind energy opportunity. A Pan-Canadian Wind Energy Plan must respect jurisdictional boundaries, BUT parties must act together on five key priorities:

- ▶ Acknowledging and providing economic value for the environmental benefits of wind energy
- ▶ Increasing and improving wind energy procurement processes across the country
- ▶ Planning and building 'wind-friendly' transmission infrastructure
- ▶ Stimulating wind power equipment manufacturing through proactive measures
- ▶ Streamlining permitting and approval processes for wind energy projects.

The document below represents a CanWEA/Federal Government collaboration which is distributed to Canadians. The document informs Canadians wind turbines are not noisy.

Nowhere does the above CanWEA/Federal Government collaboration disclose to Canadians:

- Peer reviewed studies^{19, 20, 21} demonstrate wind turbine produce sound which is perceived to be more annoying than other equally loud sources of sound.
- At the levels experienced at typical receptor distances in Ontario, sound from wind turbines is expected to result in a non-trivial percentage of persons being highly annoyed and research has shown that annoyance associated with sound from wind turbines can be expected to contribute to stress related health impacts in some persons.²²
- Health Canada’s examination of the scientific literature “conclusively demonstrated” the health effect from exposure to wind turbine noise in an increase of self-reported general annoyance and complaints (i.e., headaches, nausea, tinnitus, vertigo).²³

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It does not escape informed Canadians that the Federal Government shares a wind energy vision similar to that of CanWEA's. For example, Health Canada excerpts below document The Federal Government of Canada shares the same wind energy targets as CanWEA. (i.e. 20 % by the year 2025)

Healthy Environments and Consumer Safety Branch

FPT Committee on Health and Environment

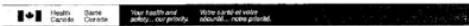
Proposal to Develop National Guidelines on Wind Turbine Noise

May 19, 2010



- Federal targets -- 20% of Canada's electricity generation by 2025
- Provincial targets – vary however on average 20-25% by 2025.

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information



Healthy Environments and Consumer Safety Branch

Health Canada Policy and Research Approach for Wind Turbine Noise
A Presentation to the Science Advisory Board
 February 2, 2012

National Landscape

- National targets - 20% of Canada's electricity generation by wind power by 2025
- June 2011 *Speech from the Throne* reaffirmed Canada's commitment to green energy

It does not escape informed Canadians that according to a CanWEA email members of the Health Canada's Wind Turbine Noise and Health Study were “reaching out” to CanWEA when they solicited a meeting to discuss the yet unannounced Health Canada led study and “other HC efforts” in the area of “health impacts and exposure to wind turbine noise”.

From: [redacted]@canwea.ca
 To: "Tara.Bower@hc-sc.gc.ca" <tara.bower@hc-sc.gc.ca>
 Cc: "David.Michaud@hc-sc.gc.ca" <David.Michaud@hc-sc.gc.ca>, [redacted]@canwea.ca
 Date: 2012-05-03 10:27 AM
 Subject: Re: Meeting with HC

Hi Tara -

Thanks for reaching out to us.

Unfortunately the 11th won't work for us, as both myself and the other CanWEA staff cc'd on this note are out of town on that day. How does the 15th work for you and David as an alternate date?

Kind Regards,

[redacted]

Health Canada has been advised of Canadians exposed to wind turbine projects who are experiencing adverse impacts to their physical mental and social well-being. In some cases families have effectively abandoned their homes or negotiated financial agreements with wind energy developers. Some adversely impacted Canadians have requested Health Canada's assistance. Health Canada has reached out to the industry trade association, CanWEA. The question is has Health Canada fulfilled its mandate by reaching out to Canadians who experience negative impacts from wind turbines? Has Health Canada

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reached out and helped adversely affected Canadians “maintain and improve their health while respecting individual choices and circumstances”?

The references cited in this open letter are excerpted primarily from Government and wind energy proponent sources. These references support the conclusion the Health Canada Wind Turbine Noise and Health Study team has not fully disclosed existing knowledge about the health impacts from exposure to wind turbine noise.

Failure to fully disclose these and other citations represent errors of omission. These errors of omission diminish the credibility of the Health Canada Wind Turbine Noise and Health Study.

I request that the Health Canada Wind Turbine Noise and Health Study Team provide to me and all Canadians their rationale for not fully disclosing acknowledgements of health effects of wind turbines.

I look forward to your response.

Yours truly,

Brett Horner BA CMA
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Canada
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613-754-2736

Appendix

CanWEA is a wind industry trade association.



CanWEA is lobbyist organization which seeks to advocate for their members and remove barriers to wind energy development across Canada.



Policy Development and Advocacy

Across Canada, electricity generated from wind is already providing clean, safe and reliable power to over 1 million homes. But we have only just scratched the surface of our potential.

CanWEA's policy development and advocacy work is driven by a desire to maximize the economic, industrial and environmental benefits of wind energy in Canada. CanWEA caucuses and committees examine policy issues, and develop and advocate for key proposals to remove barriers to wind energy development across the country. Our caucuses operate federally and in provinces across the country – our voice is your voice. It's our job to make sure member concerns are heard and action plans are regularly put in motion.

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CanWEA is a registered federal lobby organization.



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● Active Registration: 776809-279-15

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Organization:	Canadian Wind Energy Association / Association canadienne de l'énergie éolienne	Name change history
Responsible Officer:	Mr. ROBERT G HORNING	
Position Title:	PRESIDENT	
Version:	776809-279-15	
Type:	Registration update	
Active from:	2012-10-16	

A. Organization Information

Organization:	Canadian Wind Energy Association / Association canadienne de l'énergie éolienne 1600 Carling Avenue Suite 710 Ottawa, ON K1Z 1G3 Canada
Telephone number:	613-234-8716 Ext.: 224
Fax number:	613-234-5642
Description of the organization's activities:	CanWEA is a national, not-for-profit association that works on behalf of our members to facilitate and promote the responsible and sustainable growth of wind energy in Canada. Wind energy is an important part of Canada's energy future, creating new investment and jobs in Canadian communities while also contributing to a cleaner environment for future generations. Established in 1984, CanWEA undertakes policy development and advocacy with different levels of government, implements a broad range of communications and outreach activities and provides educational and networking opportunities for all stakeholders.

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- ³ Health Canada, *Useful Information for Environmental Assessments*, (2010), Published by authority of the Minister of Health.
- ⁴ Email from Stephen Bly, Chief, Acoustics Division, Consumer & Clinical Radiation Protection Bureau, Health Canada, February 2009
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