

**Open Submission: Risk of Harm to Children
and Industrial Wind Turbines**

Health and Social-economic Impacts in Canada

Submitted by Carmen Krogh, BScPharm

May 1, 2013

Author's note: this submission is made on behalf of the Kerr family from Ontario, Canada. The family raises concerns about their son who will be at risk from exposure to a wind energy facility. The family has verified their comments.

Open Submission: Risk of Harm to Children and Industrial Wind Turbines

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Submitted by Carmen Krogh, BS cPharm

May 1, 2012

To:

The Honourable Leona Aglukkaq
Minister of Health
Health Canada
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Copy:

The Right Honourable Stephen Harper
Prime Minister of Canada
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David S. Michaud, PhD
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May 1, 2012

Dear Minister Aglukkaq,

Re: Health Canada Wind Turbine Noise and Health Study

1 Background

This submission is being made regarding risk of harm to a child associated with exposure to a wind energy facility. This facility is not yet operational but approval for the facility is pending.

I have forwarded a number of submissions, both public and confidential, to the Minister, Health Canada on behalf of other families who had expressed concerns for their children and grand-children. In addition, I have provided several submissions, public and confidential, with examples of increased vulnerability associated with pre-existing medical conditions such as autism, respiratory conditions and other when industrial wind turbine facilities are sited in close proximity to family homes and schools. These have been copied to the Principle Investigator of the Wind Turbine Noise study.

Excerpts and references from peer reviewed and published research and other documentation of health and social-economic impacts associated with wind energy facilities have been provided to the Minister, Health Canada and copied to the Principle Investigator.

I have commented that vigilance and long term surveillance systems regarding risks to children associated with wind energy facilities are lacking.

The lack of resolution associated with industrial wind energy facilities has led to serious health, social, economic and altered quality of life issues.

The harm reported is in conflict with the World Health Organisation's definition of health:

“: “Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”¹

Many jurisdictions, including the Canadian federal, provincial, and territorial governments and health officials have accepted WHO's definition of health (Health Canada, 2004, vol. 1, p. 1-1).”²

2 Purpose

The purpose of this submission is to inform Health Canada about the Kerr family's concern for their son; to request an investigation/inquiry into the siting of wind energy facilities in close proximity to family homes and schools; to request that further approvals be placed on hold; and those reporting health impairment at existing sites receive resolution to their satisfaction.

I have provided a copy of my comments to The Right Honourable Stephen Harper, Prime Minister of Canada, and Dr. David Michaud, Principle Investigator.

3 Disclaimer

I declare no conflicts and have received no financial support for the research, authorship, and/or publication of this submission.

The personal information used to compile this submission has been verified and confirmed by the family.

4 Particulars

The Kerr family reports:

“I am writing to voice my concerns regarding the wind turbine project that is intended for the Bethany/Pontypool area. I live on Lifford Road which is within a few kilometers of the proposed site. Besides the obvious concerns of noise pollution and the destruction of our beautiful horizon, I am deeply concerned about the implications for my son’s health.

My son suffers from a seizure disorder, namely rolandic seizure disorder. He was diagnosed at the age of seven (he is now almost eleven) and has been medicated on a very potent anti-seizure medication until this past September. The medication used to control his seizures has many detrimental side effects, not the least of which is liver dysfunction and bone marrow suppression. Obviously, we are ecstatic that he is no longer requiring these harsh drugs to control his seizures, and he has been seizure free since September.

My concern is that the noise/vibrations emanating from the turbines will have a negative impact on my son’s disorder, requiring these potent anti-seizure medications once again. I am terrified of the impact of living in close proximity to these turbines and the consequences this holds for my son.

Everyone deserves the right to live in an environment that promotes the health of themselves, their family and their community. I implore you to stop the development of the wind turbine project in our community for the sake of my son and the many others who also face the negative health effects of the turbines.

Sincerely,
Sharon Kerr
Bethany, Ontario”

5 Canada and rights of the child

Canada has had a role regarding “rights of the child”:

“Canada played an instrumental role in drafting and promoting the United Nations Convention on the Rights of the Child. The Convention outlines the responsibilities governments have to ensure a child’s right to survival, healthy development, protection and participation in all matters that affect them. The four general principles of the Convention are: non-discrimination, the best interests of the child, the right to life, survival and development, and respect for the views of the child.

The UN General Assembly unanimously adopted the Convention on November 20th, 1989. As of September 2010, the Convention has been ratified by 193 countries, making it the most widely ratified human rights treaty.

Canada ratified the Convention in 1991. The Public Health Agency of Canada is responsible for coordinating federal implementation of the Convention in Canada. The Department of Justice is responsible for its legislative implementation at the federal level.”³

The United Nations Convention on the Rights of the Child proclamation states that “childhood is entitled to special care and assistance”:

“Preamble

Recalling that, in the Universal Declaration of Human Rights, the United Nations has proclaimed that childhood is entitled to special care and assistance,

Convinced that the family, as the fundamental group of society and the natural environment for the growth and well-being of all its members and particularly children, should be afforded the necessary protection and assistance so that it can fully assume its responsibilities within the community,⁴

The above United Nations proclamation that “childhood is entitled to special care and assistance” signatories “Have agreed as follows” to a number of Articles that can be retrieved from the site <http://www2.ohchr.org/english/law/crc.htm> Indications are that “...the governments that have ratified it have legally agreed to fulfill its provisions.” The Canadian Children’s Rights Council notes:

“The U.N. Convention on the Rights of the Child is the most ratified of all the United Nations Human Rights treaties. The treaty affirms and describes the fundamental human rights of all children (all human beings below the age of 18), and the governments that have ratified it have legally agreed to fulfill its provisions. The CRC forms the most comprehensive and well-established international standard for children’s rights and provides the framework for the actions of UNICEF, the UN children’s agency.

Children's rights are also protected under the other UN human rights instruments, which include the Universal Declaration of Human Rights, the International Covenant on Civil and Political Rights, the International Covenant of Economic, Social and Cultural Rights, International Labour Organization Conventions and numerous other documents.”⁵

6 Risks to children *[not intended to be exhaustive]*

Excerpts from a fact sheet from the World Health Organization states:

“Facts and figures

Noise is an underestimated threat that can cause a number of short- and long-term health problems, such as for example sleep disturbance, cardiovascular effects, poorer work and school performance, hearing impairment, etc.

Who is most affected?

Some groups are more vulnerable to noise. As children spend more time in bed than adults, they are more exposed to night noise.

Nuisance at night can lead to an increase in medical visits and spending on sleeping pills, which affects families’ budgets and countries’ health expenditure. The gap between rich and poor is likely to increase if governments fail to address noise pollution.

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.”⁶

Excerpts from The World Health Organization’s “Training Package for the Health Sector” on “Children and Noise” identify vulnerabilities:

“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”⁷

“It is logical to consider certain sub groups of children (since conception) to be particularly at risk for harm from excess noise exposure. These include the fetus, babies and very young infants born preterm, with low birth weigh or small for gestational age. Also, children who have learning disabilities or attention difficulties may be more likely to develop early problems with mild hearing loss compared to children without these challenges, and children on ototoxic medications may have higher likelihood of developing problems from exposure to excess noise.”⁸

A brief overview of the WHO Training Package notes that adverse effects from noise exposure can include direct ear damage, indirect adverse effects (physiological and psychological effects) and impaired cognition. The “indirect damage” of Indirect adverse effects can include stress-related somatic effects (stress hormone, blood pressure and muscle spasm) and psychological effects can include annoyance/isolation, sleep disturbance and mental health issues. Cognitive effects can include reading, concentration, memory and attention issues. Chronic noise exposure impairs cognitive function (reading comprehension and long term memory) and that dose-response relationships are supported by both laboratory and field studies and that “Over 20 studies have reported that noise adversely effects children’s academic performance”.⁹

Children with pre-existing medical conditions can have increased risks of adverse effects. For example autism,^{10, 11, 12} asthma,^{13, 14} migraine,^{15, 16} bronchitis,¹⁷ and epilepsy^{18, 19} can be vulnerable to the effects of noise and/or stress and/or sleep disturbance. These effects can be detrimental to the health of children. Childhood asthma²⁰ and migraine²¹ can be triggered by stress.

Niemann et al state:

“With children the effects of noise induced annoyance from traffic, as well as neighbourhood noise, are evident in the respiratory system. The increased risk of illness in the respiratory system in children does not seem to be caused primarily by air pollutants, but rather, as the results for neighbourhood noise demonstrate, by emotional stress.”²²

A submission dated December 27, 2012 provided excerpts of judicial decisions associated with wind turbine appeals including among other issues and the risk to autistic children.

Indications are that UK planning inspectors and planning authorities have been sufficiently convinced of the adverse effects of wind turbines on children with AS (Autistic Spectrum Disorders) of similar severity to the children reported here, to refuse planning permission for several wind energy facilities.

The December 27 2012 submission ²³ described the risks to children in general and for those with pre-existing medical conditions similar to the son of the Kerr family

7 Conclusion

Published peer reviewed references document individuals living in the environs of wind turbines report reduced sleep quality and- / -or sleep disturbance and- / -or lower quality of life. ²⁴ , ²⁵ , ²⁶ , ²⁷ , ²⁸

There are no precautionary measures in place for children in public or private child care centres, schools or other institutions that care for children part or full-time. Parents and caregivers are unable to protect the health of their children and their capacity to learn.

Due to the siting of wind energy facilities in close proximity to residences, some children may be limited in their ability to play outdoors in order to avoid the potential risk of ill health.

Krogh and Horner (September 2012) note: ²⁹

“Inequity exists as participants who host industrial wind turbines typically “agree” and/or are compensated to accept noise, nuisance and / or other effects through a contractual arrangement. ³⁰ , ³¹ Non participants typically have not agreed, or may not be given a similar opportunity to be compensated for noise, nuisance and / or other effects.

An example of a lease agreement states:

“The Rent, in respect of the Specified Locations...represent compensation in full for...nuisance, noise, signal interference,..., casting of shadows and other inconveniences or damage...incurred by Lessor from the acts or omissions of Lessee.”” ³²

This inequity appears to violate the principle that all children are to be treated equally i.e. that of “non-discrimination”. ³³

Children living in homes exposed to the noise and other emissions of industrial wind turbines are reported to suffer adverse health effects ³⁴ and may be at risk of mental and / or physical adverse health effects similar to that of their parents.

Vigilance and long term surveillance systems regarding risks and adverse effects related to children are lacking. Such programs are necessary to evaluate the risks to children who have been exposed to industrial wind turbines. This evaluation should take place before proceeding with additional approvals.

Research indicates New Experts i.e. humans, “are objective measuring instruments...”.³⁵
The role of New Experts has been described in other submissions to Health Canada (*see Krogh and Harrington October 31, 2012 submission to Health Canada*)³⁶

Canada has committed to four general principles:

“... non-discrimination, the best interests of the child, the right to life, survival and development, and respect for the views of the child”.³⁷

As the result of the anticipated proliferation in the future³⁸ of industrial wind turbine facilities in Canada, it is expected more Canadians, including children in general, and those with special needs such as autism, epilepsy, migraine and those with respiratory disorders will be at risk of harm. Risk of learning/cognitive difficulties is also a risk factor.

Action by Health Canada would support its “Mission and Vision” as the responsible authority to help “people of Canada maintain and improve their health” and its “Objectives” to “prevent and reduce risks to individual health and the overall environment”.³⁹

The Policy Interpretation Network on Children’s Health and Environment comments on the use of the precautionary principle i.e. prevention:

Policies that may protect children’s health or may minimise irreversible health effects should be implemented, and policies or measures should be applied based on the precautionary principle, in accordance with the Declaration of the WHO Fourth Ministerial Conference on Environment and Health in Budapest in 2004.⁴⁰

Regarding precaution, the World Health Organization states:

“...where there is a reasonable possibility that public health will be damaged, action should be taken to protect public health without awaiting full scientific proof.”⁴¹

There is an opportunity to invoke the precautionary principle. Until guidelines are established that protect human health and social-economic viability, no further development of wind energy facilities should occur and existing sites reporting health issues should be resolved to the satisfaction of the those reporting health impairment or risk factors.

Respectfully submitted,

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