

## **Backgrounder**

Since the report by the Chief Medical Officer of Health for Ontario was released in May of 2010, a great deal more research has been developed and published on the subject of the environmental noise and infrasound produced by industrial wind power generators (turbines) which needs to be considered. Nurses engaged in primary and/or community health care may be called upon to assist with people experiencing negative health impacts due to exposure to the unique noise and infrasound produced by these machines.

At present, no clinical research exists in Ontario to assess the potential for negative health effects from industrial-scale wind turbines, and there is no scientific research to support the provincial government's guidelines for siting of these projects, or to establish a protocol to monitor noise and confirm compliance with regulated sound levels. This research needs to be developed and validated.

There is ample evidence that industrial wind turbines can harm human health if sited too close to residents. Recent evidence—which has been published since the Chief Medical Officer of Health's report in 2010—include the following. (Please note that “annoyance” is a medical term for significant even severe mental stress, due to external causes.)

### **Ontario Environmental Review Tribunal Decision, July 18, 2011**

The decision was rendered after the Tribunal heard the testimony of more than 20 qualified medical experts.

“This case has successfully shown 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.” Case Numbers: 10-121/10-122 *Erickson v. Director*, Ministry of the Environment Environmental Review Tribunal, Decision, p. 207

### **Peer Reviewed journals**

“Our results suggest that utility-scale wind energy generation is not without adverse health impacts on nearby residents....we conclude that night-time wind turbine noise limits should be set conservatively to minimize harm...” Shepherd D, McBride D, Welch D, Dirks KN, Hill EM. Evaluating the impact of wind turbine noise on health-related quality of life. *Noise Health* 2011 13:333-339. Available at <http://www.noiseandhealth.org/text.asp?2011/13/54/333/85502>

“Assessing the effects of wind turbines on human health is an emerging field, as demonstrated by the limited number of peer-reviewed articles published since 2003. Conducting further research into the effects of wind turbines on human health, emotional and physical,...is warranted.” Knopper L, Ollson CA. Health effects and wind turbines: A review of the literature. *Environmental Health* 2011 10:78. Available at <http://www.ehjournal.net/content/10/1/78>

“There is overwhelming evidence that wind turbines cause serious health problems in nearby residents, usually stress-disorder type diseases, at a nontrivial rate.” Phillips CV. Properly interpreting the epidemiological evidence about the health effects of industrial wind turbines on nearby residents. *Bulletin of Science, Technology and Society* 2011 33:303-315.