

Ontario Liberals frequently trumpet that their “noise limit of 40 decibels has been in place for over 30 years and meets the World Health Organization’s night-time noise guideline – which is protective of human health and a good night’s sleep. “

In fact, the following information is from the World Health Organization (WHO) Regional Office for Europe’s “Noise” page.

“The WHO guidelines for community noise recommend less than **30 A-weighted decibels (dB(A)) in bedrooms during the night** for a sleep of good quality and less than 35 dB(A) in classrooms to allow good teaching and learning conditions. The WHO guidelines for night noise recommend **less than 40 dB(A)** of annual average (L<sub>night</sub>) outside of bedrooms to prevent adverse health effects from night noise.”

That Liberal 40 decibel noise limit is further compromised by a leaked April 2010 internal memo. A provincial Ministry of the Environment Senior Environmental Officer states that documented computer model output error rates compounding manufacturer sound level emission error rates has resulted in a sound variance that can range up to 45 decibels.

“The setbacks were reportedly determined in accordance with the Ministry of Environment’s 2009 Publication “Development of Noise Setbacks for Wind Farms” (“2009 Ministry Setback Development Publication”). The setbacks were determined using a computer model which reportedly has an output error of +/- 3 dB. The computer model uses sound level emissions data provided by the manufacturer of the wind turbines generators (WTGs). In the case of the Melancthon Ecopower Centre General Electric WTGs the sound level emissions are reported to have an error of +/- 2 dB. So in fact, the Ministry is using a computer program with an output error of +/- 3 dB, where the data input into the computer program may have a +/- 2 dB error. It is not clear if these errors are added, subtracting, multiplied or divided by each other. If the errors are simply added, then the potential error in the predicted sound level limit at the receptor is +/- 5 dB. In the Melancthon Ecopower Centre case, an approval was issued where the predicted sound levels at most of the receptors was 40 dBA (rounded-off). If a 5 dB error is applied, then the predicted sound level at the receptor could actually be as low as 35 dBA or as high as 45 dBA.”

The 5 page memo goes on to elaborate on the need to take into account the amplitude modulation or blade swooshing sound of the wind turbines and the Senior Environmental Officer suggests an additional 5dB correction is required.

“It appears it is reasonable to suggest the setback calculations should have included a 5dB addition to the sound level emissions from the WTGs to account for the amplitude modulation or blade swooshing sound of the WTGs. A 5 dB addition would address the Ministry observations and the Ministry 2007 Acoustic Consulting Report finding that the sound contamination from WTGs has a blade swoosh or amplitude modulation characteristic. A 5 dB addition for this cyclic variation of the quality of the

sound discharged into the natural environment from WTGs would also be consistent with the Ministry's Publication Noise Pollution Control 104."

**Therefore the 40 decibel noise limit touted by the Liberals is actually at a minimum a 45 decibel noise limit and perhaps up to a 50 decibel noise limit.**

And finally, that Liberal 40 decibel noise limit is completely "blown" away by another leaked document, dated June 2009, written by yet another Senior Environmental Officer.

"The most pressing and immediate issue is that Certificates of Approval (AIR) have been issued for wind turbines with noise emission compliance levels specified in the approval. MOE currently has no approved methodology for field measurement of the noise emission from multiple noise sources. As such, there is no way for MOE field staff (and I would submit anyone else), to confirm compliance or lack thereof with the noise limits set in the approvals."

So let's put it all together. Despite the Liberal noise compliance claims, the WHO does not advocate a 40 decibel noise level as being protective of human health and a good night's sleep. Further, the calculations the government is using in order to establish this 40 decibel level are flawed and can result in an actual decibel level of up to 50. And finally, all of the above is irrelevant as MOE field staff cannot measure the noise emissions in any case!

Sadly, it is clear that concern for the health of the citizens of Ontario has taken a distant back seat to whatever is motivating the Liberal Party to provide wind turbine project approvals, despite so much scientific and practical uncertainty in regards to Public Health and Compliance issues.

Denise Wolfe  
Stella, Ontario

WHO reference:

<http://www.euro.who.int/en/what-we-do/health-topics/environment-and-health/noise/facts-and-figures>

leaked documents available at:

[http://windconcernsontario.files.wordpress.com/2011/08/foi\\_pgs\\_45-501-c\\_hall-5page1.pdf](http://windconcernsontario.files.wordpress.com/2011/08/foi_pgs_45-501-c_hall-5page1.pdf)

and

<http://windconcernsontario.files.wordpress.com/2011/06/moe-approval-of-wind-projects3.pdf>