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Subject: FW: EB 2013-0203
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Sent: January-10-14 10:07 PM
To: BoardSec
Cc: RegulatoryAffairs@ieso.ca; btreble@westlincoln.ca; regulatory@HydroOne.com
Subject: EB 2013-0203

Ontario Energy Board:
I am writing to you about the Niagara Region Wind Corporation project. NRWC have proposed 77 Enercon industrial wind turbines. Three of these will be E-82's and the remainder will be E-101's.
I understand that their FIT contract will expire on February 24, 2014. I want to point out a couple of things before that contract is extended.
Sound Power Level
NRWC has stated in their documents that the sound power level of an Enercon E-101 is 104.8 dBA. I have at least 15 documents from other wind projects around the world that state the sound power level of an Enercon E-101 is 106 dBA. If NRWC is going to run their Enercon E-101 wind turbines so that they produce a maximum sound level 0f 104.8 dBA, I believe they will have to do this in a de-rated capacity. If they do de-rate the Enercon E-101's, they won't be able to meet the 3 MW per turbine or the total 230 MW capacity. I don't believe they can run the Enercon E-101's at full capacity to meet the sound requirements and also meet the capacity requirements. The NRWC project is the only document that I can find stating that an Enercon E-101 has a sound power level of 104.8 dBA.
There has been a recent case in Germany where 3 dBA must be added to the sound level of Enercon turbines. I believe the only way that NRWC can be noise compliant is to de-rate their turbines, thereby not meeting their FIT contract.
Sound Modeling
I have taken a look at the sound modeling in the final REA documents. Based on the modeling submitted by NRWC, there are many non-participating receptors that will have a noise level of 40.0 dBA at their homes. This is the maximum allowable noise level according to the Green Energy Act. The sound modeling in NRWC's final REA documents has used a sound power level of 104.8 dBA for an Enercon E-101. The Environmental Protection Act has stated that sound power levels must be rounded to the nearest whole number. Using 105 dBA for the E-101's will make the noise level non-compliant.
The MOE has also stated that the loudest industrial wind turbine must be used for the entire modeling procedure. The final REA documents have used 103.3 dBA for the E-82's. Using 105 dBA for all turbines will increase the noise level at a non-participating receptor's home.
The final REA documents used the ISO 9613-2 algorithm to model the noise level at each receptor. The ISO algorithm states that there is an error of +/- 3 dBA in the model. I don't believe that NRWC has compensated for this in the final REA sound modeling documents.
The ministry also states that worst case scenario must be used. Both Enercons have an error of +/- 1 dBA in their sound power level. I believe that this has not been considered in the sound modeling and would bring the worst case scenario to 106 dBA, making many of the wind turbines non-compliant in terms of sound level.

Based on the statements above, it would appear that the only way that NRWC can be noise compliant would be to run the industrial wind turbines in a de-rated mode, thereby not meeting their required output of 230 MW.

Yours truly,
Lois Johnson