Proposed Changes to MOECC compliance protocol for wind turbine noise

Turbine Measurements (E-Audit)

Issue / section	Proposed Language	Consequence / comment
Assessment of compliance page 48 - (E3.1.1) and (E3.1.2)	Tests are compliant if the measured Sound Power Level is lower than the permitted level + 0.5 dBA (i.e. 0.5 dB grace)	Majority of tests will fall under this condition
	If tests show sound emission levels higher than permitted (by more than 0.5dBA) there are 2 options:	
	1 - Remodel turbines with New measured sound power level	Some previously submitted sites may have to revisit this option. Risk is high if compliance margin was low. Lack of clarity on how to apply the result
	2 - conduct a receptor audit at worst affected receptor from that turbine	
	If either of the above cannot demonstrate compliance, then mitigation will be requried.	Noise Abatement Action Plans can include derating or curtailing during specific conditions. Timelines can be worked out during the development of the plan
Clarifications on accepted methodology page 50 - (E3.2.1)	1. Not acceptable to use binning analysis as defined by the standard 3.2.1 (b)	Some reports may have to be resubmitted -- could change results slightly (higher or lower)
	2. Acquistion based on measurements over long periods of time not acceptable (for example, one measurement day in spring, and another in the fall)	Some submitted reports may have to be resubmitted with smaller data set
Incomplete E-tests page 52 (E3.2.2)	The MOECC will not accept test reports that do not fill the 9 and 10m/s bins. If this data is missing, MOECC will direct the proponent to obtain this data within 60 days	This is not practically possible -- for virtually any site in Ontario. There are a handful of days a year appropriate for getting the 9 and 10m/s (ground level) wind speed. No site in Ontario has a complete audit by this standard.
CAN/CSA 61400-11:13	Edition 3 of the standard is referenced as an acceptable measurement standard	Lack of clarity on applicablity -- does this mean tests can be done in accordance with this standard for existing REA projects?

aercoustics

Proposed Changes to MOECC compliance protocol for wind turbine noise

Receptor Measurements (I-Audit)

Issue / section	Proposed Language	Consequence / comment
Compliance determination page 56 (E5.1.1)	The resulting sound levels are rounded to integer sound pressure levels and compared to the limit. A compliant level is defined as less than or equal to the prescribed limits.	This effectively means there is a 0.5dB tolerance on the turbine levels at the receptor. 40.6 would not be deemed compliant
Additional data filtering . Page 42 (D5.2)	Data is required to be filtered for downwind only, and for turbine power >85%	This will severely restrict the number of data points that will be included in the analysis
	Number of required data points remains the same	Effectively means all audits completed under current regime would be deemed incomplete
Incomplete audit submission - Page 57 (E5.2)	2 options to deal with incomplete audit:	
	1. combine the spring/fall audits to try and get one complete audit	
	2. conduct a RAM-I Audit (Revised Assessment Methodology)	MOECC intent is to be able to make an assessment based on a smaller set of data that is more focused on where data exists, and can be assessed more conservatively
RAM-I Audit - Page 58 (E.5.4)	look at wind speeds 0-7m/s and during:	Not clear at this time if RAM-I Audit is any more likely to be complete compared to the current audit. Aercoustics currently undertaking some sensitivity analysis on whether this would be beneficial to the average site. The main question is wind direction
	downwind	
	turbine operation >85% power	
	Relaxing of the gusting criteria slightly	
	Turbine ON: 60 points	
	Background: 30 points	
	Only 3 wind bins between 0-7 need be	
Tonality	To be assessed in accordance with IEC method, with penalties applied as specified in ISO method	Provides some clarity to an unwritten rule. Could still benefit from clarity on how it would be applicable to large data sets

For more information please contact:
Payam Ashtiani
PayamA@aercoustics.com
416-249-3361
ca.linkedin.com/in/PayamAshtiani

aercoustics