

November 14, 2017

Ms. Nhung Nguyen
Ernestown Wind Park LP
c/o Horizon Legacy Group
60 St. Clair Ave East, Suite 300
Toronto, Ontario
M4T 1N5

Re: Summary of Immission and Emission Audits
Ernestown Wind Park, Ernestown, Ontario

Dear Ms. Nguyen,

Howe Gastmeier Chapnik Limited (operating as HGC Engineering) was retained by Ernestown Windpark, LP (“the Company”) to complete the Acoustic Audit – Immission and Acoustic Audit – Emission of the Ernestown Wind Park. The Audits were required as conditions of the Renewable Energy Approval (“REA”) number 8798- 98GRW issued for the project by the Ontario Ministry of the Environment and Climate Change (“MOECC”). The project is located in the Township of Ernestown, Ontario and consists of five Enercon E82 wind turbine generators, each rated at 2.0 MW with hub heights of 98 metres.

Condition E of the REA required the Company to carry out an Acoustic Audit – Immission of the sound levels of the operation of the Ernestown Wind Park, entailing measurements at one point of reception during two separate occasions in accordance with Part D of the MOECC’s 2011 Compliance Protocol for Wind Turbine Noise.

Condition F of the REA required the Company to carry out an Acoustic Audit – Emission of the acoustic emissions produced by one wind turbine generator at the facility in accordance with IEC Standard 61400-11.

This letter summarizes the Immission and Emission Audit reports prepared to satisfy Conditions E and F.

Immission Audit

The first Immission Audit was completed in the spring of 2015, with data collection occurring between March 17 and May 22, 2015. The Spring Acoustic Audit – Immission Report, dated June 24, 2015 summarizes the results. The detailed results table from the Spring Immission Audit is included below.

The second Immission Audit was completed in the fall of 2015, with data collection occurring between October 2 and November 27, 2015. The Fall Acoustic Audit – Immission Report, dated

March 14, 2016 summarizes the results. The detailed results table from the Fall Immission Audit is included below.

Table 1: Spring Acoustic Audit – Immission Summary

Leq Sound Level [dBA]	10 metre Wind Speed							
	4 m/s		5 m/s		6 m/s		7 m/s	
LEQ Average Operating (ON) / std dev.	40	3.5	42	3.3	43	2.9	46	2.4
LEQ Average Ambient (OFF) / std dev.	37	3.6	39	3.5	41	3.5	42	3.5
LEQ Wind Project Only / std dev.	37	3.6	38	3.6	40	3.4	43	3.2
Criteria	40.0		40.0		40.0		43.0	
Excess	0		0		0		0	

Table 2: Fall Acoustic Audit – Immission Summary

Leq Sound Level [dBA]	10 metre Wind Speed							
	4 m/s		5 m/s		6 m/s		7 m/s	
LEQ Average Operating (ON) / std dev.	38	3.0	40	2.4	42	2.5	44	2.3
LEQ Average Ambient (OFF) / std dev.	36	3.0	38	3.2	40	3.0	42	3.2
LEQ Wind Project Only / std dev.	34	3.1	34	2.7	37	2.8	40	2.9
Criteria	40.0		40.0		40.0		43.0	
Excess	0		0		0		0	

The two Immission Audit sound level measurements and analysis, as performed in accordance with the MOECC's 2011 Compliance Protocol for Wind Turbine Noise, indicate that the Ernestown Wind Park meets the applicable MOECC sound level limits.

Emission Audit

The Acoustic Audit – Emission was completed during the spring of 2015, with measurement data collection occurring on April 2 and May 12, 2015. The acoustic emissions of Wind Turbine Generator WTG 2, an Enercon E82 wind turbine, were determined in accordance with CAN/CSA-C61400-11:07 (IEC 61400-11:2002+A1:2006). A summary of the acoustic results are provided in the following table:

Table 3: Sound Power Level of WTG 2

Standardized Wind Speed [m/s]	6	7	8	9*	10*
Sound Power Level $L_{WA,k}$ in dB(A):	100.7	102.8	103.7	103.8	103.9
Tonal Audibility, ΔL_{ak} in dB:	<-3.0	<-3.0	<-3.0	<-3.0	<-3.0
Total Uncertainty U_C in dB:	1.5	1.4	1.3	1.7	1.7

* Above 95% rated power.

The Emission Audit Report (WTG 2 Acoustic Report), dated September 28, 2015 provides additional details.

The results of the acoustic measurements and analysis, completed to satisfy the Emission Audit condition of the REA, indicate that wind turbine generator WTG 2 meets the manufacturer's specified sound power level of 103.5 dBA, at and below 10 m/s, within the 0.5 dBA allowance of the MOECC's 2017 Compliance Protocol for Wind Turbine Noise.

Summary

Sound level measurements, analysis and reporting, have been completed to satisfy Conditions E and F of Renewable Energy Approval number 8798- 98GRW for the Ernestown Wind Park.

Best regards,

Howe Gastmeier Chapnik Limited



Ian R. Bonsma, PEng, INCE