



# ARCUS

## LOCHLUICHART WIND FARM EXTENSION II

### APPENDIX 8.A

### WIND TURBINE NOISE EMISSION DATA

DECEMBER 2018

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**1 LOCHLUICHART AND LOCHLUICHART EXTENSION WIND FARMS: SIEMENS 3.0-101 74.5 M HUB HEIGHT**

**Table A8.1 Manufacturer's Noise Emission Data**

	Standardised 10 m Wind Speed, ms-1								
	4	5	6	7	8	9	10	11	12
	Sound Power Level, dB, LWA,								
Manufacturer's Sound Power Level, dB, LWA	94.9	99.6	104.8	106.9	108.0	108.0	108.0	108.0	108.0
Manufacturer's Sound Power Level, dB,LWA, including 2 dB allowance for Uncertainty	96.9	101.6	106.8	108.9	110.0	110.0	110.0	110.0	110.0
Manufacturer's Sound Power Level, dB, LWA, including 2 dB allowance for Uncertainty and 3 dB cumulative safety margin	99.9	104.6	109.8	111.9	113.0	113.0	113.0	113.0	113.0

**Table A8.2 Manufacturer's Octave Band Spectra**

	Octave Band Frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
	Sound Power Level, dB, LWA,							
Manufacturer's Octave-band Sound Power Level, dB, LWA	82.8	94.7	101.4	104.7	101.4	93.5	82.6	79.3
Octave-band Sound Power Level, scaled to 110.0 dB, LWA	84.8	96.7	103.4	106.7	103.4	95.5	84.6	81.3
Octave-band Sound Power Level, scaled to 113.0 dB, LWA	87.8	99.7	106.4	109.7	106.4	98.5	87.6	84.3

**2 CORRIEMOILLIE WIND FARM (GE 2.85-103 TURBINES, 73.5 M HUB HEIGHT)**

**Table A8.3 Manufacturer's Noise Emission Data**

	Standardised 10 m Wind Speed, ms-1								
	4	5	6	7	8	9	10	11	12
	Sound Power Level, dB, LWA,								
Manufacturer's Sound Power Level, dB, LWA	95.0	95.9	99.4	102.6	104.5	105.0	105.0	105.0	105.0
Manufacturer's Sound Power Level, dB,LWA, including 2 dB allowance for Uncertainty	97.0	97.9	101.4	104.6	106.5	107.0	107.0	107.0	107.0
Manufacturer's Sound Power Level, dB, LWA, including 2 dB allowance for Uncertainty and 3 dB cumulative safety margin	100.0	100.9	104.4	107.6	109.5	110.0	110.0	110.0	110.0

**Table A8.4 Manufacturer's Octave Band Spectra**

	Octave Band Frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
	Sound Power Level, dB, LWA,							
Manufacturer's Octave-band Sound Power Level, dB, LWA	89.5	94.3	95.6	97.2	99.3	99.3	93.0	73.4
Octave-band Sound Power Level, scaled to 107.0 dB, LWA	91.5	96.3	97.6	99.2	101.3	101.3	95.0	75.4
Octave-band Sound Power Level, scaled to 110.0 dB, LWA	94.5	99.3	100.6	102.2	104.3	104.3	98.0	78.4