

# **Crookwell Wind Farm**

**Noise Compliance Strategy** 

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#### 1. Introduction

In accordance with the executed Supply and Install Contract (clause 8.8 and Annex V) and the Development Approval, this report addresses how noise compliance will be achieved at Crookwell 2 Wind Farm.

#### 2. Wind Turbine Specifications

Rated output [MW]	3.43
Hub height [m]	95
Rotor diameter [m]	130
Total turbines	28

The above table provides a summary of the GE 3.4-130 wind turbine generator (WTG) at Crookwell 2. Please refer to Annex D of the executed Supply and Install Contract for further technical specifications.

The noise emitted by the 3.4-130 WTG is predominantly determined by the aerodynamic noise of the rotor blades, which is directly dependent on the circumferential or blade tip speed. The sound power level can be lowered by reducing the rotor speed and thus lowering and limiting the tip speed. The rated power level is reduced accordingly. In addition the noise can be reduced by pitching the blade.

Due the proximity of the WTG's to noise receptors, the WTG's at Crookwell will operate in Noise Reduced Operation (NRO) in certain wind conditions as defined in Annex V of the Contract. This will ensure that the noise limits set out in the Development Approval are met.

Please refer to the attached NRO document and tables for further information.



#### 3. Testing Requirements

GE has engaged acoustic consultant SLR Consulting to perform noise monitoring in accordance with the requirements of Section 4 of Annex V of the Supply and Install Contract. The relevant operational noise criteria which form the Acoustic Guarantee are given by Table 2 of Item 48 of the Development Approval:

	Criteria (dB(A)) Referenced to Hub Height Wind Speed (m/s)												
Residence			Cinterna		ierenceu iu	nuo neigii	e milu spe	eu (iiiis)					
Residence	3 or less	4	5	6	7	8	9	10	11	12 or more			
R1, 1a, 8	35	35	35	35	35	35	36	38	41	45			
R19	35	35	35	35	35	35	37	38	41	43			
R20, 117, 118, 119	35	35	35	35	35	35	36	38	41	43			
R58, 59	35	35	35	35	35	36	38	39	41	42			
R60, 61, 62	35	35	35	35	35	36	38	40	43	45			
R64, 65	35	35	35	35	35	38	41	43	46	48			
R69, 70	35	35	35	35	35	35	38	40	44	46			
R71, 73	35	35	35	35	35	37	40	42	45	48			
R106	37	38	39	40	42	44	45	47	49	51			
R120, 123, 130, 131	35	35	35	36	37	38	39	41	42	44			
All other residences not associated with the development and wind speeds > 12m/s	The higher of 35 dB(A) or the existing background noise level plus 5 dB(A)												

#### Table 2: Noise criteria dB(A)

Note: To identify the residences referred to in Table 2, see the applicable figure in Appendix 2.

Clause 3.5 of Annex V of the Supply and Install Contract requires Operational Noise Testing at Test Locations to be conducted within 3 months of the Practical Completion Date for the Wind Farm. The Development Approval has the same requirement to determine whether the development is complying with relevant conditions of the project consent.



#### 4. Scope

The testing consists of two stages: **Baseline Noise Monitoring** and **Compliance Noise Monitoring**, which will commence within 3 months after final practical completion. SLR Consulting will receive and review all relevant documentation including: wind farm layout and receptor co-ordinates, Noise Impact Assessment Report completed for the planning application, resident contact details etc. SLR's scope consists broadly of two stages as follows:

#### Stage 1: Baseline Noise Monitoring

- Deploy up to 10 noise monitors and data loggers at up to 10 identified locations
- Noise monitoring for 4 weeks
- Analyse the monitored baseline data to develop the relevant noise criteria using a statistical regression analysis. This data will then be compared against historically derived regression curves to evaluate if there has been any significant change in baseline noise conditions for the location
- Produce Baseline Noise Report

#### Stage 2: Compliance Noise Testing

- Produce noise monitoring test plan
- Deploy up to 10 noise monitors and data loggers at up to 10 identified locations from Stage 1
- Noise monitoring for up to 6 weeks
- Produce final Noise Compliance Assessment Report



#### 5. Methodology

The noise monitoring methodology for both stages takes into account the following factors to ensure the accuracy and integrity of results.

#### Deployment of Monitoring Equipment

The monitored parameters at all sites (10 in total) will include the LA1, LA10, LA90, LA95 and LAeq noise levels. Unattended weather monitoring station will also be deployed, capable of recording local wind speed and direction, temperature, RH and rainfall. This data will be used to assess monitored noise data validity.

The noise monitoring shall also include simultaneous C weighted noise levels which will facilitate the 60 dBC Low Frequency Noise special audible characteristic (SAC) of the assessment of NSW Wind Energy: Noise Assessment Bulletin AB02. The position of the baseline noise monitoring sites shall be selected with due consideration of the requirements of SA EPA Guidelines, previous monitoring undertaken (if any) and other factors including direction of exposure from future wind farm, shelter from wind, presence of extraneous noise sources and solar access etc. The baseline noise monitoring sites will be documented through extensive photographs and GPS location. Monitoring shall extend for 4 weeks.

#### Data Analysis and Baseline Noise Report submission

Analysis of collected data shall include the removal of data collected during periods of invalid conditions (e.g. heavy rain, high local wind, high extraneous noise sources etc.), which will ensure the integrity of the collected data. Wind data can be obtained from a suitable nearby monitoring mast to provide additional meteorological information, i.e. hub height wind speed, wind direction, throughout the monitoring period.

The relevant baseline noise curve can then be developed using a statistical regression analysis of the valid monitored data which feeds into the final **Baseline Noise Report,** suitable for submission to the project proponent.



#### Compliance Noise Monitoring

As per the Baseline Noise Monitoring period, meteorological conditions are evaluated during the survey period to determine if the 500 intervals of worst case wind direction requirement have been fulfilled. During the site visit a short term attended noise survey will be completed at each monitoring site to subjectively scrutinise the presence (or otherwise) of any Special Audible Characteristics e.g. tonality, that may require further detailed objective evaluation.

Following a comprehensive analysis of data, a complete detailed **Noise Compliance Assessment Report** will be prepared, demonstrating compliance to the Development Approval requirements, suitable for submission to the project proponent.

#### 6. Schedule

A high level schedule is below to illustrate the timings of the background and operational noise monitoring periods:

Activity	Start	Finish
Baseline Noise Monitoring	20/04/2018	18/05/2018
Produce Baseline Noise Report	21/05/2018	18/06/2018
Compliance Noise Monitoring (within 3 months of PC)	Approx. August 2018	Approx. September 2018
Produce Compliance Noise Report	Approx. September 2018	Approx. October 2018



7. Appendix A – NRO Technical Document



Technical Documentation Wind Turbine Generator Systems 3.4-130 - 50 Hz

- Original -



# **Product Acoustic Specifications**

Noise-Reduced Operation according to IEC Incl. Octave and 1/3<sup>rd</sup> Octave Band Spectra

There are files embedded to this document. You may need Adobe® Reader® Version X or higher.



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#### **1** Introduction

Thanks to its plant control system, the 3.4-130 WTGS is able to enter noise-reduced operating mode (NRO =  $\underline{N}$ oise- $\underline{R}$ educed  $\underline{O}$ peration) without any manual intervention. This is not a compulsory fixed operating point, but a range below 'normal' nominal operation that can be defined by means of parameter settings.

With the aid of the control system the turbine can be switched to noise-reduced mode, usually depending on the time of day, e.g. NRO at nighttime and normal operation at daytime.

The noise emitted by the 3.4-130 is predominantly determined by the aerodynamic broadband noise of the rotor blades, which is directly dependent on the circumferential or blade tip speed.

The sound power level can be lowered by reducing the rotor speed and thus lowering and limiting the tip speed. The rated power level is reduced accordingly. In addition the noise can be reduced by pitching the blade. The NRO modes use these two techniques to get the optimal energy yield while meeting the noise target.

In the upper wind speed range at the benefit of lower noise levels, there is some loss in energy yield because of the reduction in power level.

Controller parameter settings determine at which maximum noise emission level the turbine operates. Reference values for various reduced sound power levels are given further on in the document.

It is always possible to determine compliance of the actual operating mode with the set operating mode as the control system constantly records the operating data on the system computer. This could be useful in meeting possible requirements issued by the monitoring authorities.

Noise-reduced operation (NRO) is enabled in a time-controlled manner via a leaded time switch. The most significant data are:

P\_Act 10 minutes mean value of electrical active power

N\_Rot 10 minutes mean value of rotor speed

The two stored parameter values thus provide clear and traceable evidence of the noise-reduced operational mode. A retrospective check of the installed system can be carried out by evaluating up to three months of recorded data.

#### 2 Wind Farm Noise Management (available as an option)

In noise-constrained areas it is often necessary to adapt the wind turbine operation to satisfy far-field noise limits. GE offers a dedicated Farm Noise Management system that provides greater flexibility and higher energy yield than standard turbine controls. This advanced scheme allows to continuously adjust the farm operation based on the environmental variables that influence farm noise emission, essentially wind speed and wind direction.

The Wind Farm Noise Management package includes the following service and hardware:

- Park level noise propagation modeling and optimization of wind farm operation,
- Table with optimum turbine set-points across the park as a function of wind speed and wind sector,
- Installation and commissioning of the Farm Noise Management Software Package.

#### **3 Sound Power Levels**

Following are 10 minute mean values of nominal power and rotor speed for the 3.4-130 turbine at different sound power levels ( $L_{WA}$ ):

NRO label	Nominal power (kW)	Nominal rotor speed (rpm)	Reduced reference value L <sub>WA</sub> (dB)
Normal Operation	3430	12.1	106.5
NRO 106	3370	11.8	106.0
NRO105	3230	11.3	105.0
NRO104	3085	10.8	104.0
NRO103	2900	10.3	103.0
NRO102	2700	9.8	102.0
NRO101	2540	9.4	101.0
NRO100	2200	8.9	100.0

Table 1: Noise-reduced operation modes

### 4 Sound Power Level as a Function of Wind Speed

The following table presents calculated reference sound power levels as a function of hub height wind.

Wind speed at hub height (m/s)	Normal Operation 106.5 Lwa (dB)	NRO 106 Lwa (dB)	NRO 105 Lwa (dB)	NRO 104 Lwa (dB)	NRO 103 Lwa (dB)	NRO 102 Lwa (dB)	NRO 101 Lwa (dB)	NRO 100 Lwa (dB)
4	95.7	95.7	95.7	95.7	95.7	95.7	95.7	95.7
5	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3
6	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7
7	102.0	102.0	102.0	102.0	102.0	101.8	100.9	100.0
8	104.7	104.6	104.6	104.0	103.0	102.0	101.0	100.0
9	106.4	105.8	105.0	104.0	103.0	102.0	101.0	100.0
10	106.5	106.0	105.0	104.0	103.0	102.0	101.0	100.0
11	106.5	106.0	105.0	104.0	103.0	102.0	101.0	100.0
12	106.5	106.0	105.0	104.0	103.0	102.0	101.0	100.0
13	106.5	106.0	105.0	104.0	103.0	102.0	101.0	100.0
14	106.5	106.0	105.0	104.0	103.0	102.0	101.0	100.0

Table 2: Reference sound power levels

The corresponding wind speed at 10 m height depends on hub height. It can be calculated for a given surface roughness using a logarithmic trend for wind shear:

$$V_{10m \ height} = V_{hub} \frac{\ln\left(\frac{10m}{z_0}\right)}{\ln\left(\frac{hub \ height}{z_0}\right)}$$

Typical values for on land surface roughness ( $z_0$ ) are 0.05 m, depending on terrain conditions.

#### 5 Uncertainty Levels

The apparent sound power levels given above are mean values from turbines under evaluation. Uncertainty levels  $u_c$ ,  $\sigma_P$ ,  $\sigma_R$  and  $\sigma_T$  associated with measurements and mean values are described in IEC 61400-11 and IEC/TS 61400-14.

For GE wind turbines, a typical value of  $\sigma_P = 0.8$  dB can be assumed.

The uncertainties for octave and 1/3<sup>rd</sup>-octave sound power levels are generally higher than for total sound power levels. Guidance is given in IEC 61400-11.

#### 6 Tonality

The tonal audibility ( $\Delta L_{a,k}$ ), when measured in accordance with the IEC 61400-11 standard, for the 3.4-130 is less than or equal to 4 dB.

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<sup>\*</sup> Simplified from IEC 61400-11: 2006 equation 7

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#### 7 IEC 61400-11 and IEC/TS 61400-14 Terminology

- L<sub>WA,K</sub> is wind turbine apparent sound power level (referenced to 10<sup>-12</sup>W) measured with A-weighting as function of wind speed. Derived from multiple measurement reports per IEC 61400-11, it is considered as a mean value
- u<sub>c</sub> is the measurement uncertainty for acoustic testing as defined in IEC 61400-11.
- $\sigma_P$  is the 3.4-130 unit-to-unit product variation according to IEC/TS 61400-14.
- $\sigma_R$  is the overall measurement testing reproducibility as defined in IEC/TS 61400-14;
- $\sigma_T$  is the total standard deviation combining both  $\sigma_P$  and  $\sigma_R$
- $\Delta L_{a,k}$  is the tonal audibility according to IEC 61400-11, described as potentially audible narrow band sound

#### 8 Octave Band Spectra and 1/3<sup>rd</sup> Octave Band Spectra

The tables in Annex I are showing octave band values for different noise-reduced operational modes at different wind speeds.

The tables in Annex II are showing the 1/3<sup>rd</sup> octave band values for different noise-reduced operational modes at different wind speeds.

#### 9 References

- IEC 61400-11, wind turbine generator systems part 11: Acoustic noise measurement techniques, ed. 2.1 (2006-11), or ed. 3 (2012-11)
- IEC/TS 61400-14, Wind turbines part 14: Declaration of apparent sound power level and tonality values, ed. 1 (2005-03)
- MNPT Machine Noise Performance Test, Technical documentation

#### Annex I – Octave Band Spectra

			NRO 10	6 – A-we	ighted O	ctave Spe	ectra (dB)					
Hub Height W	/ind Speed [m/s]	4	5	6	7	8	9	10	11	12	13	14.0- cut out
Wind speed at 10 m height for a hub height of 85 m [m/s]		2.8	3.6	4.3	5.0	5.7	6.4	7.1	7.8	8.5	9.3	10- cut out
Wind speed at 10 m height for a hub height of 110 m [m/s]		2.8	3.4	4.1	4.8	5.5	6.2	6.9	7.6	8.3	8.9	9.6- cut out
Wind speed at 10 m height for a hub height of 164.5 m [m/s]		2.6	3.3	3.9	4.6	5.2	5.9	6.5	7.2	7.9	8.5	9.2- cut out
	16	49.2	49.9	53.3	56.4	59.2	61.1	61.2	61.4	61.4	61.4	61.3
	32	64.8	65.3	68.1	71.1	73.6	75.1	75.2	75.6	75.6	75.6	75.5
	63	77.3	78.0	80.4	83.4	85.7	86.9	87.0	87.3	87.3	87.3	87.2
	125	86.5	87.0	89.1	92.2	94.5	95.3	95.5	95.8	95.7	95.6	95.6
Frequency	250	89.2	89.7	92.1	95.4	98.0	99.0	99.2	99.0	98.7	98.7	98.7
[Hz]	500	89.3	89.9	92.4	95.9	98.7	100.0	100.2	100.0	100.1	100.1	100.2
	1000	89.6	90.1	92.5	95.9	98.6	100.0	100.1	100.2	100.4	100.6	100.7
	2000	87.3	88.4	90.5	93.6	96.0	97.3	97.4	97.8	97.9	97.8	97.5
	4000	78.5	80.3	82.9	85.9	88.1	89.2	89.5	89.1	88.5	87.6	87.0
	8000	60.1	61.3	63.6	66.6	68.8	70.1	70.2	68.3	67.0	66.2	65.2
Total Sound	Power Level [dB]	95.7	96.3	98.7	102.0	104.6	105.8	106.0	106.0	106.0	106.0	106.0

Table 3: NRO 106 Octave Band Sound Power Levels as a function of wind speeds

			NRO 10	5 – A-we	ighted O	ctave Spe	ectra (dB)					
Hub Height Wind Speed [m/s]		4	5	6	7	8	9	10	11	12	13	14.0- cut out
Wind speed at 10 m height for a hub height of 85 m [m/s]		2.8	3.6	4.3	5.0	5.7	6.4	7.1	7.8	8.5	9.3	10- cut out
Wind speed at 10 m height for a hub height of 110 m [m/s]		2.8	3.4	4.1	4.8	5.5	6.2	6.9	7.6	8.3	8.9	9.6- cut out
Wind speed at 10 m height for a hub height of 164.5 m [m/s]		2.6	3.3	3.9	4.6	5.2	5.9	6.5	7.2	7.9	8.5	9.2- cut out
	16	49.2	49.9	53.3	56.4	59.2	60.6	60.7	60.8	60.8	60.7	60.6
	32	64.8	65.3	68.1	71.1	73.6	74.6	74.7	74.9	74.9	74.9	74.8
	63	77.3	78.0	80.4	83.4	85.7	86.3	86.3	86.5	86.5	86.5	86.5
	125	86.5	87.0	89.1	92.2	94.5	94.7	94.8	94.9	94.7	94.7	94.7
Frequency	250	89.2	89.7	92.1	95.4	98.0	98.2	98.2	97.9	97.8	97.7	97.8
[Hz]	500	89.3	89.9	92.4	95.9	98.7	99.1	99.0	99.0	99.1	99.2	99.2
	1000	89.6	90.1	92.5	95.9	98.6	99.1	99.1	99.3	99.5	99.6	99.7
	2000	87.3	88.4	90.5	93.6	96.0	96.6	96.6	96.8	96.8	96.6	96.2
	4000	78.5	80.3	82.9	85.9	88.1	88.3	88.3	87.9	86.9	86.1	85.8
	8000	60.1	61.3	63.6	66.6	68.8	68.4	67.9	66.7	65.3	64.7	64.0
Total Sound	Power Level [dB]	95.7	96.3	98.7	102.0	104.6	105.0	105.0	105.0	105.0	105.0	105.0

Table 4: NRO 105 Octave Band Sound Power Levels as a function of wind speeds

			NRO 10	4 – A-we	ighted O	ctave Spe	ectra (dB)					
Hub Height W	/ind Speed [m/s]	4	5	6	7	8	9	10	11	14.0- cut out		
Wind speed on hub height of	it 10 m height for a 85 m [m/s]	2.8	3.6	4.3	5.0	5.7	6.4	7.1	7.8	8.5	9.3	10- cut out
Wind speed at 10 m height for a hub height of 110 m [m/s]		2.8	3.4	4.1	4.8	5.5	6.2	6.9	7.6	8.3	8.9	9.6- cut out
Wind speed at 10 m height for a hub height of 164.5 m [m/s]		2.6	3.3	3.9	4.6	5.2	5.9	6.5	7.2	7.9	8.5	9.2- cut out
	16	49.2	49.9	53.3	56.4	59.1	59.4	59.4	59.6	59.6	59.6	59.5
	32	64.8	65.3	68.1	71.1	73.3	73.4	73.5	73.8	73.9	73.8	73.8
	63	77.3	78.0	80.4	83.4	85.2	85.2	85.2	85.5	85.5	85.5	85.5
	125	86.5	87.0	89.1	92.2	93.9	93.9	93.9	94.0	93.9	93.9	93.9
Frequency	250	89.2	89.7	92.1	95.4	97.4	97.5	97.4	97.0	96.9	96.9	96.9
[Hz]	500	89.3	89.9	92.4	95.9	98.0	98.1	98.1	97.9	98.1	98.2	98.3
	1000	89.6	90.1	92.5	95.9	97.9	97.9	98.0	98.2	98.4	98.4	98.5
	2000	87.3	88.4	90.5	93.6	95.4	95.4	95.4	95.9	95.7	95.4	95.0
	4000	78.5	80.3	82.9	85.9	87.5	87.5	87.5	86.8	85.6	84.7	84.8
	8000	60.1	61.3	63.6	66.6	68.2	68.3	68.2	65.5	64.3	63.7	63.2
Total Sound	Power Level [dB]	95.7	96.3	98.7	102.0	104.0	104.0	104.0	104.0	104.0	104.0	104.0

Table 5: NRO 104 Octave Band Sound Power Levels as a function of wind speeds

			NRO 10	3 – A-we	ighted O	ctave Spe	ectra (dB)					
Hub Height Wind Speed [m/s]		4	5	6	7	8	9	10	11	12	13	14.0- cut out
Wind speed at 10 m height for a hub height of 85 m [m/s]		2.8	3.6	4.3	5.0	5.7	6.4	7.1	7.8	8.5	9.3	10- cut out
Wind speed at 10 m height for a hub height of 110 m [m/s]		2.8	3.4	4.1	4.8	5.5	6.2	6.9	7.6	8.3	8.9	9.6- cut out
Wind speed at 10 m height for a hub height of 164.5 m [m/s]		2.6	3.3	3.9	4.6	5.2	5.9	6.5	7.2	7.9	8.5	9.2- cut out
	16	49.2	49.9	53.3	56.4	58.9	59.2	59.3	59.4	59.4	59.4	59.3
	32	64.8	65.3	68.1	71.1	72.8	73.0	73.0	73.3	73.4	73.3	73.3
	63	77.3	78.0	80.4	83.4	84.5	84.5	84.5	84.8	84.8	84.8	84.7
	125	86.5	87.0	89.1	92.2	92.9	92.9	92.9	93.0	92.9	92.9	92.9
Frequency	250	89.2	89.7	92.1	95.4	96.4	96.5	96.4	96.0	95.9	95.9	95.9
[Hz]	500	89.3	89.9	92.4	95.9	97.1	97.1	97.1	96.9	97.1	97.2	97.3
	1000	89.6	90.1	92.5	95.9	97.0	96.9	97.0	97.2	97.4	97.4	97.5
	2000	87.3	88.4	90.5	93.6	94.4	94.4	94.4	94.9	94.7	94.4	94.0
	4000	78.5	80.3	82.9	85.9	86.5	86.5	86.5	85.8	84.6	83.7	83.8
	8000	60.1	61.3	63.6	66.6	67.2	67.3	67.2	64.5	63.3	62.7	62.2
Total Sound	Power Level [dB]	95.7	96.3	98.7	102.0	103.0	103.0	103.0	103.0	103.0	103.0	103.0

Table 6: NRO 103 Octave Band Sound Power Levels as a function of wind speeds

			NPO 10	2 1 10	ighted O	ctavo Sp	octra (dP)					
			INKO 10	72 – A-we	ignied O	cluve spe	сtru (ub)					14.0
Hub Height W	/ind Speed [m/s]	4	5	6	7	8	9	10	11	12	13	cut out
Wind speed on hub height of	it 10 m height for a 85 m [m/s]	2.8	3.6	4.3	5.0	5.7	6.4	7.1	7.8	8.5	9.3	10- cut out
Wind speed on hub height of	it 10 m height for a 110 m [m/s]	2.8	3.4	4.1	4.8	5.5	6.2	6.9	7.6	8.3	8.9	9.6- cut out
Wind speed on hub height of	it 10 m height for a 164.5 m [m/s]	2.6	3.3	3.9	4.6	5.2	5.9	6.5	7.2	7.9	8.5	9.2- cut out
	16	49.2	49.9	53.3	56.4	57.4	57.5	57.5	57.7	57.7	57.6	57.6
	32	64.8	65.3	68.1	71.0	71.6	71.6	71.7	72.0	72.0	72.0	72.0
	63	77.3	78.0	80.4	83.2	83.4	83.4	83.4	83.7	83.8	83.8	83.7
	125	86.5	87.0	89.1	92.0	92.2	92.2	92.2	92.3	92.2	92.2	92.2
Frequency	250	89.2	89.7	92.1	95.2	95.5	95.5	95.5	95.2	95.1	95.2	95.2
[Hz]	500	89.3	89.9	92.4	95.6	95.9	95.9	95.9	95.9	96.0	96.2	96.3
	1000	89.6	90.1	92.5	95.6	95.9	95.8	95.9	96.0	96.2	96.3	96.3
	2000	87.3	88.4	90.5	93.4	93.6	93.5	93.5	93.8	93.6	93.0	92.6
	4000	78.5	80.3	82.9	85.7	85.9	85.9	85.9	84.6	83.1	82.6	82.6
	8000	60.1	61.3	63.6	66.4	66.5	66.4	66.2	63.9	62.3	61.4	60.0
Total Sound	Power Level [dB]	95.7	96.3	98.7	101.8	102.0	102.0	102.0	102.0	102.0	102.0	102.0

Table 7: NRO 102 Octave Band Sound Power Levels as a function of wind speeds

			NRO 10	1 - A-we	ighted O	ctave Spe	ectra (dB)					
Hub Height W	/ind Speed [m/s]	4	5	6	7	8	9	10	11	12	13	14.0- cut out
Wind speed a hub height of	t 10 m height for a 85 m [m/s]	2.8	3.6	4.3	5.0	5.7	6.4	7.1	7.8	8.5	9.3	10- cut out
Wind speed a hub height of	t 10 m height for a 110 m [m/s]	2.8	3.4	4.1	4.8	5.5	6.2	6.9	7.6	8.3	8.9	9.6- cut out
Wind speed a hub height of	t 10 m height for a 164.5 m [m/s]	2.6	3.3	3.9	4.6	5.2	5.9	6.5	7.2	7.9	8.5	9.2- cut out
	16	49.2	49.9	53.3	56.3	56.6	56.6	56.7	56.8	56.8	56.8	56.7
	32	64.8	65.3	68.1	70.6	70.8	70.8	70.8	71.1	71.2	71.2	71.1
	63	77.3	78.0	80.4	82.5	82.6	82.6	82.6	82.8	82.9	82.9	82.9
	125	86.5	87.0	89.1	91.2	91.3	91.3	91.3	91.4	91.3	91.3	91.4
Frequency	250	89.2	89.7	92.1	94.4	94.5	94.5	94.5	94.3	94.2	94.3	94.4
[Hz]	500	89.3	89.9	92.4	94.8	94.9	94.9	94.9	94.8	95.0	95.2	95.4
	1000	89.6	90.1	92.5	94.8	94.9	94.8	94.8	95.0	95.2	95.2	95.3
	2000	87.3	88.4	90.5	92.6	92.6	92.6	92.6	92.8	92.5	91.9	91.4
	4000	78.5	80.3	82.9	84.9	85.1	85.0	84.9	83.4	82.1	81.4	81.4
	8000	60.1	61.3	63.6	65.6	65.7	65.7	65.0	62.9	61.8	60.1	58.8
Total Sound	Power Level [dB]	95.7	96.3	98.7	100.9	101.0	101.0	101.0	101.0	101.0	101.0	101.0

Table 8: NRO 101 Octave Band Sound Power Levels as a function of wind speeds

			NRO 10	0 - Δ-we	ighted O	ctave Sne	ectra (dB)					
				ю – <del>л</del> -we		ctuve Spe						14.0
Hub Height W	/ind Speed [m/s]	4	5	6	7	8	9	10	11	12	13	cut out
Wind speed on hub height of	it 10 m height for a 85 m [m/s]	2.8	3.6	4.3	5.0	5.7	6.4	7.1	7.8	8.5	9.3	10- cut out
Wind speed on hub height of	it 10 m height for a 110 m [m/s]	2.8	3.4	4.1	4.8	5.5	6.2	6.9	7.6	8.3	8.9	9.6- cut out
Wind speed on hub height of	it 10 m height for a 164.5 m [m/s]	2.6	3.3	3.9	4.6	5.2	5.9	6.5	7.2	7.9	8.5	9.2- cut out
	16	49.2	49.9	53.3	55.4	55.5	55.6	55.7	55.8	55.8	55.8	55.7
	32	64.8	65.3	68.1	69.7	69.8	69.8	69.9	70.1	70.2	70.2	70.1
	63	77.3	78.0	80.4	81.7	81.6	81.7	81.7	81.9	82.0	82.0	82.0
	125	86.5	87.0	89.1	90.3	90.4	90.4	90.4	90.5	90.5	90.5	90.5
Frequency	250	89.2	89.7	92.1	93.5	93.5	93.5	93.4	93.4	93.3	93.4	93.5
(Hz)	500	89.3	89.9	92.4	93.8	93.8	93.8	93.8	93.8	94.0	94.2	94.3
	1000	89.6	90.1	92.5	93.8	93.8	93.8	93.8	93.9	94.1	94.2	94.2
	2000	87.3	88.4	90.5	91.6	91.6	91.7	91.7	91.8	91.4	90.7	90.3
	4000	78.5	80.3	82.9	84.1	84.1	84.0	83.8	82.5	80.8	80.3	80.3
	8000	60.1	61.3	63.6	64.8	64.7	64.3	63.6	62.5	60.3	59.2	57.8
Total Sound	Power Level [dB]	95.7	96.3	98.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 9: NRO 100 Octave Band Sound Power Levels as a function of wind speeds

#### Annex II – 1/3<sup>rd</sup> Octave Band Spectra

			NRO :	106 - 1/3	3 <sup>rd</sup> -Octa	ve Spect	tra (dB)					
Hub Height W	/ind Speed [m/s]	4	5	6	7	8	9	10	11	12	13	14- cut out
Wind speed a hub height of	t 10 m height for a 85 m [m/s]	2.8	3.6	4.3	5.0	5.7	6.4	7.1	7.8	8.5	9.3	10- cut out
Wind speed a hub height of	t 10 m height for a 110 m [m/s]	2.8	3.4	4.1	4.8	5.5	6.2	6.9	7.6	8.3	8.9	9.6- cut out
Wind speed a hub height of	t 10 m height for a 164.5 m [m/s]	2.6	3.3	3.9	4.6	5.2	5.9	6.5	7.2	7.9	8.5	9.2- cut out
	12.5	34.5	35.6	39.4	42.7	45.6	47.9	48.0	48.1	48.1	48.0	47.9
	16	42.0	42.8	46.4	49.6	52.4	54.4	54.6	54.7	54.7	54.6	54.5
	20	48.1	48.8	52.1	55.2	57.9	59.8	59.9	60.1	60.1	60.1	60.0
	25	53.6	54.1	57.3	60.3	62.9	64.7	64.8	65.0	65.1	65.0	64.9
	32	58.6	59.1	62.0	65.0	67.6	69.2	69.3	69.6	69.7	69.6	69.5
	40	63.1	63.6	66.3	69.3	71.8	73.3	73.4	73.8	73.8	73.8	73.7
	50	66.9	67.4	70.0	72.9	75.4	76.7	76.8	77.2	77.2	77.2	77.2
	63	71.4	72.0	74.5	77.5	79.8	81.1	81.2	81.5	81.5	81.5	81.4
	80	75.5	76.2	78.5	81.5	83.8	84.9	85.0	85.4	85.4	85.3	85.3
	100	78.8	79.5	81.6	84.6	86.9	87.9	88.0	88.4	88.4	88.3	88.3
	125	81.7	82.3	84.3	87.3	89.5	90.3	90.5	90.9	90.8	90.7	90.7
	160	83.4	83.9	86.1	89.2	91.6	92.4	92.6	92.8	92.6	92.5	92.5
	200	84.1	84.5	86.9	90.1	92.6	93.4	93.6	93.6	93.3	93.2	93.2
	250	84.7	85.1	87.5	90.8	93.4	94.4	94.6	94.4	94.0	94.0	94.0
Frequency	315	84.6	85.1	87.5	91.0	93.7	94.8	95.1	94.7	94.4	94.0	94.4
[Hz]	400	84.5	85.0	87.5	91.0	93.8	95.1	95.1	94.9	94.9	94.8	94.9
61 Hay	500	84.5	85.1	87.6	91.0	93.0	95.3	95.5	95.2	95.3	95.4	95.4
	630	8/17	85.3	87.8	01.2	97.0	95.5	95.5	95.2	95.5	05.9	05 g
	800	84.9	85.4	87.8	91.2	94.0	95.4	95.5	95.5	95.8	96.0	96.1
	1000	84.8	85.3	87.7	91.5	93.8	95.2	95.5	95.5	95.0	95.0	96.0
	1250	8/17	85.3	87.6	00 Q	93.6	95.0	95.4	95.5	95.7	95.5	95.0
	1600	Q7.0	8/LQ	86.0	00.0	02.7	9/10	0/1	0/15	9/17	9/17	9/16
	2000	82.7	83.7	85.8	90.1 88.0	92.7	94.0	94.1	94.5	94.7	94.7	94.0
	2500	80.2	00.7 01.0	93.0 93.0	86.0	91.2 80.2	00 Z	90.5	00.0	00.8	00.3	92.0 80.7
	3150	76.7	79.6	Q1 Z	Q/1 2	09.2 86 /i	90.5 87.5	90.3 87.9	90.9 87.7	90.0 87 Z	90.3 86 Z	Q5 7
	7000	70.7	7/1 2	76.7	70.0	00.4 02.2	07.J QZ 1	07.0 QZ /i	01.1 Q26	Q1 E	00.J Q0.6	QO /i
	5000	67/1	74.2 68.0	70.7	7/1 Z	76.7	77 0	00.4 70.1	76 3	75.0	7/1/1	7/1 0
	6200	50.0	61.0	1 1.C	14.J	10.1 60 E	60.0	60.0	600	66.7	65.0	64.0
	8000	0.52 /10 0	01.U	51 7	54.0	570	50 C	09.9 50 7	567	55.2	570	52 E
	1000	40.2 70 5	49.3 77.0	31.7 36.6	54.9 //0.2	57.U /12.7	JO.Z	20.3 /1/1 Z	20.3 /12./i	55.2 //0.0	23.0 20./i	32.3 70 E
Total Sound P	ower Level (dB)	95.7	96.3	98.7	40.2 <b>102.0</b>	42.7 <b>104.6</b>	105.8	106.0	42.4 106.0	<b>106.0</b>	<b>106.0</b>	<b>106.0</b>

Table 10: NRO 106 1/3<sup>rd</sup>-Octave Band Sound Power Levels as a function of wind speeds

– Original –

			NRO 2	LO5 – 1/3	3 <sup>rd</sup> -Octa	ve Spect	tra (dB)					
Hub Height W	/ind Speed [m/s]	4	5	6	7	8	9	10	11	12	13	14- cut out
Wind speed a hub height of	t 10 m height for a 85 m [m/s]	2.8	3.6	4.3	5.0	5.7	6.4	7.1	7.8	8.5	9.3	10- cut out
Wind speed a hub height of	t 10 m height for a 110 m [m/s]	2.8	3.4	4.1	4.8	5.5	6.2	6.9	7.6	8.3	8.9	9.6- cut out
Wind speed a hub height of	t 10 m height for a 164.5 m [m/s]	2.6	3.3	3.9	4.6	5.2	5.9	6.5	7.2	7.9	8.5	9.2- cut out
	12.5	34.5	35.6	39.4	42.7	45.6	47.4	47.5	47.5	47.5	47.5	47.3
	16	42.0	42.8	46.4	49.6	52.4	53.9	54.0	54.1	54.1	54.0	53.9
	20	48.1	48.8	52.1	55.2	57.9	59.3	59.4	59.5	59.5	59.4	59.3
	25	53.6	54.1	57.3	60.3	62.9	64.2	64.3	64.4	64.4	64.4	64.3
	32	58.6	59.1	62.0	65.0	67.6	68.7	68.8	68.9	69.0	68.9	68.9
	40	63.1	63.6	66.3	69.3	71.8	72.8	72.9	73.1	73.1	73.1	73.0
	50	66.9	67.4	70.0	72.9	75.4	76.2	76.3	76.5	76.5	76.5	76.4
	63	71.4	72.0	74.5	77.5	79.8	80.5	80.5	80.7	80.7	80.7	80.7
	80	75.5	76.2	78.5	81.5	83.8	84.4	84.4	84.6	84.5	84.5	84.5
	100	78.8	79.5	81.6	84.6	86.9	87.3	87.4	87.6	87.5	87.4	87.4
	125	81.7	82.3	84.3	87.3	89.5	89.8	89.9	89.9	89.8	89.8	89.8
	160	83.4	83.9	86.1	89.2	91.6	91.7	91.8	91.8	91.6	91.6	91.6
	200	84.1	84.5	86.9	90.1	92.6	92.7	92.7	92.5	92.3	92.3	92.3
	250	84.7	85.1	87.5	90.8	93.4	93.5	93.5	93.2	93.1	93.0	93.1
Frequency	315	84.6	85.1	87.5	91.0	93.7	93.9	93.9	93.6	93.5	93.4	93.5
[Π2]	400	84.5	85.0	87.5	91.0	93.8	94.1	94.1	93.9	93.9	93.9	93.9
	670	84.5	85.1	87.0	91.1	93.9	94.4	94.5	94.5	94.3	94.4	94.4
	800	84.7 94.0	00.0 05./i	07.0	91.2	94.0	94.5	94.4	94.5	94.7	94.8	94.9
	1000	04.9 8/1.8	0J.4 Q5 7	07.0 97.7	91.5	94.0 07.0	94.5	94.5	94.7	94.9	95.0	95.1
	1250	8/17	85 3	87.6	91.1 QA Q	95.0	94.4	94.4	94.5	94.7	94.9	95.0
	1600	87.0	8/18	86.9	90.9	93.0	94.2	94.2	94.4	94.5	94.0	94.0
	2000	82.7	83.7	85.8	88.9	91.2	91.8	91.8	92.1	92.0	91.7	91 3
	2500	80.2	81.8	83.9	86.9	89.2	89.7	89.8	89.8	89.5	88.9	883
	3150	76.7	78.6	81.3	84.2	86.4	86.7	86.7	86.6	85.7	84.8	84.4
	4000	72.7	74.2	76.7	79.9	82.2	82.3	82.1	81.0	79.8	79.4	79.3
	5000	67.4	68.9	71.2	74.3	76.7	76.6	76.0	74.5	73.7	73.1	72.6
	6300	59.8	61.0	63.3	66.3	68.5	68.1	67.6	66.4	65.0	64.4	63.7
	8000	48.2	49.3	51.7	54.9	57.0	57.0	56.1	54.8	53.6	52.0	51.3
	10000	32.5	33.9	36.6	40.2	42.7	42.7	42.2	40.9	39.6	37.5	36.5
Total Sound P	ower Level [dB]	95.7	96.3	98.7	102.0	104.6	105.0	105.0	105.0	105.0	105.0	105.0

Table 11: NRO 105 1/3<sup>rd</sup>-Octave Band Sound Power Levels as a function of wind speeds

			NRO 1	L04 - 1/3	3 <sup>rd</sup> -Octa	ve Spect	tra (dB)					
Hub Height W	/ind Speed [m/s]	4	5	6	7	8	9	10	11	12	13	14- cut out
Wind speed a hub height of	t 10 m height for a 85 m [m/s]	2.8	3.6	4.3	5.0	5.7	6.4	7.1	7.8	8.5	9.3	10- cut out
Wind speed a hub height of	t 10 m height for a 110 m [m/s]	2.8	3.4	4.1	4.8	5.5	6.2	6.9	7.6	8.3	8.9	9.6- cut out
Wind speed a hub height of	t 10 m height for a 164.5 m [m/s]	2.6	3.3	3.9	4.6	5.2	5.9	6.5	7.2	7.9	8.5	9.2- cut out
	12.5	34.5	35.6	39.4	42.7	45.6	46.1	46.2	46.3	46.3	46.2	46.1
	16	42.0	42.8	46.4	49.6	52.3	52.7	52.8	52.9	52.9	52.8	52.7
	20	48.1	48.8	52.1	55.2	57.8	58.1	58.1	58.3	58.3	58.3	58.2
	25	53.6	54.1	57.3	60.3	62.7	63.0	63.0	63.3	63.3	63.2	63.2
	32	58.6	59.1	62.0	65.0	67.3	67.5	67.6	67.8	67.9	67.8	67.8
	40	63.1	63.6	66.3	69.3	71.5	71.6	71.7	72.0	72.1	72.0	72.0
	50	66.9	67.4	70.0	72.9	75.0	75.1	75.1	75.4	75.5	75.5	75.4
	63	71.4	72.0	74.5	77.5	79.4	79.4	79.4	79.7	79.7	79.7	79.7
	80	75.5	76.2	78.5	81.5	83.3	83.3	83.3	83.6	83.6	83.6	83.6
	100	78.8	79.5	81.6	84.6	86.3	86.3	86.4	86.7	86.6	86.6	86.6
	125	81.7	82.3	84.3	87.3	88.9	88.9	88.9	89.1	89.0	89.0	89.0
	160	83.4	83.9	86.1	89.2	90.9	91.0	91.0	90.9	90.8	90.8	90.8
	200	84.1	84.5	86.9	90.1	91.9	92.0	91.9	91.6	91.5	91.5	91.5
_	250	84.7	85.1	87.5	90.8	92.8	92.9	92.8	92.4	92.2	92.2	92.3
Frequency	315	84.6	85.1	87.5	91.0	93.1	93.2	93.1	92.7	92.6	92.6	92.6
[IIZ]	400	84.5	85.0	87.5	91.0	95.2	93.5	93.2	92.9	92.9	93.0	93.0
	670	84.5 94.7	05.1	87.0 07.0	91.1	93.3	95.4	93.3	93.2	95.4	95.4	93.5
	800	04.7 8/i 0	00.0 85 /i	07.0 97.9	91.2	93.3	93.4	93.4	95.4	93.7	93.0	95.9 0/i 1
	1000	84.8	85.3	87.7	91.5	93.2	93.2	93.2	93.4	93.6	93.7	93.8
	1250	84.7	85.3	87.6	90.9	92.9	92.9	93.0	93.4	93.4	93.4	93.4
	1600	83.9	84.8	86.9	90.1	92.0	92.0	92.1	92.6	92.6	92.4	92.1
	2000	82.7	83.7	85.8	88.9	90.6	90.6	90.6	911	90.9	90.5	90.0
	2500	80.2	81.8	83.9	86.9	88.6	88.6	88.6	88.9	88.4	87.6	87.1
	3150	76.7	78.6	81.3	84.2	85.8	85.8	85.8	85.5	84.4	83.4	83.4
	4000	72.7	74.2	76.7	79.9	81.5	81.6	81.6	79.8	78.6	78.1	78.4
	5000	67.4	68.9	71.2	74.3	76.1	76.2	76.2	73.6	72.6	71.8	71.7
	6300	59.8	61.0	63.3	66.3	67.9	68.0	67.9	65.2	64.0	63.4	62.9
	8000	48.2	49.3	51.7	54.9	56.4	56.5	56.4	54.1	52.4	51.3	50.5
	10000	32.5	33.9	36.6	40.2	42.1	42.1	42.0	39.9	38.2	36.5	35.5
Total Sound P	ower Level [dB]	95.7	96.3	98.7	102.0	104.0	104.0	104.0	104.0	104.0	104.0	104.0

Table 12: NRO 104 1/3<sup>rd</sup>-Octave Band Sound Power Levels as a function of wind speeds

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			NRO :	LO3 - 1/3	3 <sup>rd</sup> -Octa	ve Spect	tra (dB)					
Hub Height W	/ind Speed [m/s]	4	5	6	7	8	9	10	11	12	13	14- cut out
Wind speed a hub height of	t 10 m height for a 85 m [m/s]	2.8	3.6	4.3	5.0	5.7	6.4	7.1	7.8	8.5	9.3	10- cut out
Wind speed a hub height of	t 10 m height for a 110 m [m/s]	2.8	3.4	4.1	4.8	5.5	6.2	6.9	7.6	8.3	8.9	9.6- cut out
Wind speed a hub height of	t 10 m height for a 164.5 m [m/s]	2.6	3.3	3.9	4.6	5.2	5.9	6.5	7.2	7.9	8.5	9.2- cut out
	12.5	34.5	35.6	39.4	42.7	45.6	46.1	46.2	46.3	46.3	46.2	46.1
	16	42.0	42.8	46.4	49.6	52.2	52.6	52.7	52.8	52.8	52.7	52.6
	20	48.1	48.8	52.1	55.2	57.6	57.9	57.9	58.1	58.1	58.1	58.0
	25	53.6	54.1	57.3	60.3	62.4	62.7	62.7	63.0	63.0	62.9	62.9
	32	58.6	59.1	62.0	65.0	66.9	67.1	67.1	67.4	67.5	67.4	67.4
	40	63.1	63.6	66.3	69.3	71.0	71.1	71.2	71.5	71.6	71.5	71.5
	50	66.9	67.4	70.0	72.9	74.4	74.4	74.5	74.8	74.9	74.9	74.8
	63	71.4	72.0	74.5	77.5	78.7	78.7	78.7	79.0	79.0	79.0	79.0
	80	75.5	76.2	78.5	81.5	82.5	82.5	82.5	82.8	82.8	82.8	82.7
	100	78.8	79.5	81.6	84.6	85.4	85.4	85.5	85.8	85.7	85.7	85.7
	125	81.7	82.3	84.3	87.3	87.9	87.9	87.9	88.1	88.0	88.0	88.0
	160	83.4	83.9	86.1	89.2	90.0	90.0	90.0	89.9	89.8	89.8	89.8
	200	84.1	84.5	86.9	90.1	90.9	91.0	90.9	90.6	90.5	90.5	90.5
_	250	84.7	85.1	87.5	90.8	91.8	91.9	91.8	91.3	91.2	91.2	91.3
Frequency	315	84.6	85.1	87.5	91.0	92.1	92.2	92.1	91.6	91.6	91.6	91.6
[[]2]	400	84.5	85.0	87.5	91.0	92.2	92.3	92.2	91.9	91.9	92.0	92.0
	500	84.5	85.1	87.0	91.1	92.3	92.3	92.5	92.2	92.3	92.4	92.5
	900	04.7	05.3 QE /i	01.0 07.0	91.2 01 7	92.4	92.4	92.4	92.4	92.1	92.8 02.0	92.9
	1000	04.9	05.4	07.0	91.5	92.4	92.4	92.4	92.5	92.0	92.9	020
	1250	04.0 8/i 7	05.5 85 7	07.7 87.6	91.1 90.0	92.2	92.2	92.2	92.4 Q2 Z	92.0	92.1 Q2 /1	92.0 Q2/i
	1600	97 Q	8/1 Q	86.0	90.9 QO 1	92.0	91.9	92.0	92.5	92.4	92.4 Q1 /i	92.4
	2000	82.7	83.7	85.8	88.9	89.6	89.6	89.6	90.1	89.9	89.5	89.0
	2500	80.2	81 A	87.9	86.9	87.6	87.6	87.6	87.9	87.4	86.6	86.1
	3150	76.7	78.6	81 3	84.2	84.8	84.8	84.8	84.5	833	82.4	82.4
	4000	72.7	74.2	76.7	79.9	80.6	80.6	80.6	78.8	77.6	77 1	774
	5000	67.4	68.9	71.2	74.3	75.1	75.2	75.2	72.6	716	70.8	70.7
	6300	59.8	61.0	63.3	66.3	66.9	67.0	66.9	64.2	63.0	62.4	61.9
	8000	48.2	49.3	51.7	54.9	55.4	55.5	55.4	53.1	51.4	50.3	49.5
	10000	32.5	33.9	36.6	40.2	41.1	41.1	41.0	38.9	37.2	35.5	34.5
Total Sound P	ower Level [dB]	95.7	96.3	98.7	102.0	103.0	103.0	103.0	103.0	103.0	103.0	103.0

Table 13: NRO 103 1/3<sup>rd</sup>-Octave Band Sound Power Levels as a function of wind speeds

			NRO 1	LO2 - 1/3	3 <sup>rd</sup> -Octa	ve Spect	tra (dB)					
Hub Height W	/ind Speed [m/s]	4	5	6	7	8	9	10	11	12	13	14- cut out
Wind speed a hub height of	t 10 m height for a 85 m [m/s]	2.8	3.6	4.3	5.0	5.7	6.4	7.1	7.8	8.5	9.3	10- cut out
Wind speed a hub height of	t 10 m height for a 110 m [m/s]	2.8	3.4	4.1	4.8	5.5	6.2	6.9	7.6	8.3	8.9	9.6- cut out
Wind speed a hub height of	t 10 m height for a 164.5 m [m/s]	2.6	3.3	3.9	4.6	5.2	5.9	6.5	7.2	7.9	8.5	9.2- cut out
	12.5	34.5	35.6	39.4	42.7	44.0	44.2	44.2	44.3	44.3	44.2	44.1
	16	42.0	42.8	46.4	49.6	50.7	50.8	50.8	50.9	50.9	50.9	50.8
	20	48.1	48.8	52.1	55.2	56.1	56.2	56.2	56.4	56.4	56.3	56.3
	25	53.6	54.1	57.3	60.3	61.1	61.1	61.2	61.4	61.4	61.4	61.3
	32	58.6	59.1	62.0	64.9	65.6	65.7	65.7	66.0	66.0	66.0	65.9
	40	63.1	63.6	66.3	69.2	69.8	69.8	69.9	70.2	70.2	70.2	70.2
	50	66.9	67.4	70.0	72.8	73.2	73.2	73.3	73.6	73.7	73.7	73.6
	63	71.4	72.0	74.5	77.3	77.6	77.6	77.6	77.9	78.0	78.0	77.9
	80	75.5	76.2	78.5	81.3	81.5	81.5	81.5	81.8	81.8	81.8	81.8
	100	78.8	79.5	81.6	84.4	84.6	84.6	84.6	84.9	84.9	84.8	84.9
	125	81.7	82.3	84.3	87.1	87.2	87.2	87.3	87.4	87.3	87.3	87.3
	160	83.4	83.9	86.1	89.0	89.2	89.2	89.3	89.2	89.1	89.1	89.1
	200	84.1	84.5	86.9	89.9	90.1	90.1	90.1	89.9	89.8	89.8	89.8
_	250	84.7	85.1	87.5	90.6	90.9	90.9	90.9	90.5	90.4	90.5	90.5
Frequency	315	84.6	85.1	87.5	90.8	91.1	91.1	91.1	90.8	90.7	90.8	90.9
[IIZ]	400	84.5	85.0	87.5	90.8	91.1	91.1	91.1	90.9	91.0	91.1	91.2
	670	84.5 94.7	05.1	87.0 07.0	90.8	91.2	91.2	91.2	91.2	91.3	91.5	91.0
	800	04.7 8/i 0	00.0 85 /i	07.0 97.9	90.9	91.2	91.2	91.2	91.3	91.5	91.7	91.9
	1000	84.8	85.3	87.7	90.9	91.0	91.0	91.5	91.3	91.0	91.6	91.6
	1250	84.7	85.3	87.6	90.6	90.9	90.8	90.9	91.0	91 3	91 3	91.0
	1600	83.9	84.8	86.9	89.9	90.1	90.1	90.1	90.4	90.5	90.2	89.8
	2000	82.7	83.7	85.8	88.7	88.8	88.8	88.7	89.1	88.8	88.1	87.5
	2500	80.2	81.8	83.9	86.7	86.9	86.8	86.9	86.8	86.1	85.1	84.6
	3150	76.7	78.6	81.3	84.0	84.2	84.2	84.2	83.4	81.7	81.2	81.3
	4000	72.7	74.2	76.7	79.7	79.9	80.0	80.0	77.6	76.4	76.1	75.8
	5000	67.4	68.9	71.2	74.0	74.4	74.4	74.2	71.8	70.6	69.8	69.0
	6300	59.8	61.0	63.3	66.1	66.2	66.1	65.9	63.6	62.0	61.1	59.8
	8000	48.2	49.3	51.7	54.6	54.9	54.6	54.4	52.3	50.3	49.2	47.0
	10000	32.5	33.9	36.6	40.0	40.2	40.0	39.9	38.1	36.2	34.7	32.2
Total Sound P	ower Level [dB]	95.7	96.3	98.7	101.8	102.0	102.0	102.0	102.0	102.0	102.0	102.0

Table 14: NRO 102 1/3<sup>rd</sup>-Octave Band Sound Power Levels as a function of wind speeds

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			NRO :	LO1 - 1/3	3 <sup>rd</sup> -Octa	ve Spect	tra (dB)					
Hub Height W	/ind Speed [m/s]	4	5	6	7	8	9	10	11	12	13	14- cut out
Wind speed a hub height of	t 10 m height for a 85 m [m/s]	2.8	3.6	4.3	5.0	5.7	6.4	7.1	7.8	8.5	9.3	10- cut out
Wind speed a hub height of	t 10 m height for a 110 m [m/s]	2.8	3.4	4.1	4.8	5.5	6.2	6.9	7.6	8.3	8.9	9.6- cut out
Wind speed a hub height of	t 10 m height for a 164.5 m [m/s]	2.6	3.3	3.9	4.6	5.2	5.9	6.5	7.2	7.9	8.5	9.2- cut out
	12.5	34.5	35.6	39.4	42.7	43.2	43.3	43.4	43.5	43.5	43.4	43.3
	16	42.0	42.8	46.4	49.5	49.8	49.9	50.0	50.1	50.1	50.0	49.9
	20	48.1	48.8	52.1	55.0	55.3	55.3	55.4	55.5	55.5	55.5	55.4
	25	53.6	54.1	57.3	60.0	60.2	60.3	60.3	60.5	60.5	60.5	60.4
	32	58.6	59.1	62.0	64.6	64.8	64.8	64.9	65.1	65.2	65.1	65.1
	40	63.1	63.6	66.3	68.8	69.0	69.0	69.0	69.3	69.4	69.4	69.3
	50	66.9	67.4	70.0	72.3	72.4	72.4	72.4	72.7	72.8	72.8	72.8
	63	71.4	72.0	74.5	76.7	76.8	76.7	76.8	77.0	77.1	77.1	77.1
	80	75.5	76.2	78.5	80.6	80.7	80.7	80.7	80.9	80.9	80.9	80.9
	100	78.8	79.5	81.6	83.7	83.8	83.8	83.8	84.0	84.0	84.0	84.0
	125	81.7	82.3	84.3	86.3	86.3	86.4	86.4	86.5	86.5	86.5	86.5
	160	83.4	83.9	86.1	88.2	88.3	88.3	88.3	88.3	88.2	88.2	88.3
	200	84.1	84.5	86.9	89.1	89.1	89.2	89.1	89.0	88.9	88.9	89.0
-	250	84.7	85.1	87.5	89.8	89.9	89.9	89.9	89.6	89.5	89.6	89.7
Frequency	315	84.6	85.1	87.5	90.0	90.0	90.1	90.0	89.8	89.8	89.9	90.0
[[]2]	400	84.5	85.0	87.5	90.0	90.0	90.0	90.0	89.9	90.0	90.2	90.3
	670	84.5 94.7	05.1 05.7	07.0	90.0	90.1	90.1	90.1	90.1	90.3 00.5	90.5	90.6
	800	04.7 8/i 0	00.0 85 /i	07.0 97.9	90.1	90.2	90.2	90.2	90.2	90.5	90.7	90.9
	1000	8/18	85 3	87.7	90.2	90.5	90.2	90.5	90.3	90.5	90.7	90.9
	1250	8/17	85 3	87.6	90.0 80.8	90.1 80.0	90.0 80.8	90.0 80.8	90.2	90.4	90.5	90.5
	1600	87.0	8/18	86.9	80.1	80.1	80.1	80.0 80.1	90.1 80 /i	80/1	90.2 80.1	88.6
	2000	82.7	83.7	85.8	87.8	87.9	879	87.8	88.1	87.7	87.0	86.3
	2500	80.2	81.8	83.9	85.9	86.1	85.9	86.0	85.9	84.9	83.9	83.6
	3150	76.7	78.6	81 3	83.2	83.4	833	83.3	82.1	80.7	80.0	80.2
	4000	72.7	74.2	76.7	78.9	79.1	79.0	78.8	76.6	75.4	74.8	74.4
	5000	67.4	68.9	71.2	73.2	73.4	73.3	72.8	70.9	69.3	68.8	67.7
	6300	59.8	61.0	63.3	65.3	65.4	65.4	64.7	62.6	61.5	59.8	58.5
	8000	48.2	49.3	51.7	53.8	53.9	53.8	53.3	51.5	50.0	47.6	46.4
	10000	32.5	33.9	36.6	39.2	39.2	39.1	38.8	37.2	35.3	33.4	31.7
Total Sound P	ower Level [dB]	95.7	96.3	98.7	100.9	101.0	101.0	101.0	101.0	101.0	101.0	101.0

Table 15: NRO 101 1/3<sup>rd</sup>-Octave Band Sound Power Levels as a function of wind speeds

			NRO 1	LOO - 1/3	3 <sup>rd</sup> -Octa	ve Spect	tra (dB)					
Hub Height W	/ind Speed [m/s]	4	5	6	7	8	9	10	11	12	13	14- cut out
Wind speed a hub height of	t 10 m height for a 85 m [m/s]	2.8	3.6	4.3	5.0	5.7	6.4	7.1	7.8	8.5	9.3	10- cut out
Wind speed a hub height of	t 10 m height for a 110 m [m/s]	2.8	3.4	4.1	4.8	5.5	6.2	6.9	7.6	8.3	8.9	9.6- cut out
Wind speed a hub height of	t 10 m height for a 164.5 m [m/s]	2.6	3.3	3.9	4.6	5.2	5.9	6.5	7.2	7.9	8.5	9.2- cut out
	12.5	34.5	35.6	39.4	41.9	42.1	42.2	42.3	42.4	42.4	42.3	42.2
	16	42.0	42.8	46.4	48.6	48.8	48.9	48.9	49.0	49.0	49.0	48.9
	20	48.1	48.8	52.1	54.1	54.2	54.3	54.4	54.5	54.5	54.5	54.4
	25	53.6	54.1	57.3	59.1	59.2	59.3	59.3	59.4	59.5	59.5	59.4
	32	58.6	59.1	62.0	63.7	63.8	63.8	63.9	64.1	64.1	64.1	64.1
	40	63.1	63.6	66.3	67.9	68.0	68.0	68.1	68.3	68.4	68.4	68.3
	50	66.9	67.4	70.0	71.4	71.4	71.5	71.5	71.7	71.8	71.9	71.8
	63	/1.4	/2.0	74.5	75.8	/5.8	/5.8	75.9	/6.0	76.2	76.2	76.2
	80	75.5	76.2	/8.5	/9.8	/9./	/9.8	/9.8	80.0	80.0	80.0	80.0
	100	/8.8	79.5	81.6	82.8	82.9	82.9	82.9	83.1	83.1	83.1	83.1
	125	81.7	82.3	84.3	85.4	85.5	85.5	85.5	85.6	85.6	85.6	85.6
	160	83.4	83.9	86.1	87.3	87.4	87.4	87.4	87.4	87.4	87.4	87.4
	200	84.1	84.5	86.9	88.2	88.2	88.2	88.1	88.1	88.0	88.0	88.1
Frequency	230	84.7	85.L	87.5 07 E	88.9	88.9	88.9	88.8	88.7	88.0	88.7	88.8 00.1
[H <sub>2</sub> ]	400	04.0 8/i 5	0J.1 85.0	07.J 87.5	89.0	89.0	89.0	00.9 99.0	00.9 99.0	80.0	80.2	09.1 90.7
[[12]	500	8/15	85.1	87.6	89.0	89.0	89.0	89.0	89.0	89.0	89.5	89.5
	630	84.7	85.3	87.8	89.1	89.1	89.1	89.2	89.1	89.4	89.7	89.8
	800	84.9	85.4	87.8	89.2	89.2	89.2	89.2	89.2	89.4	89.7	89.8
	1000	84.8	85.3	87.7	89.0	89.0	89.0	89.0	89.2	89.3	89.4	89.4
	1250	84.7	85.3	87.6	88.8	88.8	88.9	88.9	89.0	89.3	89.2	88.9
	1600	83.9	84.8	86.9	88.1	88.1	88.2	88.2	88.4	88.4	87.9	87.5
	2000	82.7	83.7	85.8	86.9	86.9	86.9	86.9	87.1	86.6	85.8	85.3
	2500	80.2	81.8	83.9	85.1	85.1	85.1	85.2	84.9	83.8	82.7	82.4
	3150	76.7	78.6	81.3	82.4	82.4	82.4	82.3	81.1	79.3	79.0	79.1
	4000	72.7	74.2	76.7	78.1	78.1	77.9	77.5	75.8	74.4	73.4	73.4
	5000	67.4	68.9	71.2	72.4	72.5	72.1	71.5	70.0	68.2	67.3	66.9
	6300	59.8	61.0	63.3	64.5	64.4	64.0	63.3	62.2	60.0	58.9	57.6
	8000	48.2	49.3	51.7	52.8	52.7	52.5	52.0	50.9	49.0	46.8	45.0
	10000	32.5	33.9	36.6	38.2	38.1	37.9	37.5	36.4	34.5	32.5	30.5
Total Sound P	ower Level [dB]	95.7	96.3	98.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 16: NRO 100 1/3<sup>rd</sup>-Octave Band Sound Power Levels as a function of wind speeds

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8. Appendix B – NRO Tables



DS-LS

	330	Q	CN	ON ON	ON ON	ON ON	ON	ON	ON	CN	ON	CN	CN	CN	CN CN	CN	CN	CN	CN N	CN				ON
	30	QN	ON	CN	CN	0 N	ON	ON	ON	ON	ON	ON	ON	0N N	CN N	ON N	ON	ON	ON	QN	CN		CN	ON N
	270	CN	ON	ON	ON	NON	NRO104	NRO106	NO	ON	ON	ON	ON	NO	NO	NO	ON	ON	ON	ON	ON	CN	ON	NO
u	240	QN	ON	ON	ON	ON	<b>NRO104</b>	<b>NRO106</b>	ON	ON	ON	ON	NO	ON	ON	ON	NO	ON	ON	ON	ON	ON	ON	NO
ptimizatic	210	No	NO	NO	ON	NO	NO	<b>NRO106</b>	NO	NO	NO	NO	NO	NO	NO	NO	NO	ON	NO	ON	ON	ON	NO	NO
n noise o	180	No	NO	NO	NO	NO	IRO106	IRO105 1	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
ith Farm	150	No	NO	ON	NO	NO	NON	NON	ON	ON	ON	ON	ON	ON	ON	NO	ON	NO	ON	0N	0N	0N N	NO	NO
ine 3 w	120	Q	NO	ON	ON	ON	0N	ON	ON	ON	ON	ON	NO	ON	ON	NO	ON	ON	ON	ON	ON	ON	NO	0N
des for turb	6	NO	NO	NO	NO	NO	NRO106	NO	ON	NO	ON	ON	ON	ON	NO	NO	NO	NO	NO	NO	NO	ON	ON	ON
NRO mo	8	NO	NO	NO	NO	NO	NRO104	NRO106	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	ON	ON
	30	NO	ON	NO	NO	ON	NRO104	NRO106	NRO106	NO	NO	NO	NO	NO	NO	NO	NO	NO	ON	NO	NO	NO	NO	NO
	_ •	NO	ON	NO	NO	ON	NRO106	NRO106	NO	NO	NO	NO	ON	NO	NO	ON	NO	ON	NO	NO	NO	NO	ON	NO
	/ind Direction [° Wind speed @ MM @ highest HH [m/s]	3,0	4,0	5,0	6,0	7,0	8,0	0'6	10,0	11,0	12,0	13,0	14,0	15,0	16,0	17,0	18,0	19,0	20,0	21,0	22,0	23,0	24,0	25,0

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	330	Q						C Z	CZ	C Z	CZ	CZ	C Z				CZ							)
	300	Q					ON N	CN	CN	CN	ON N	CN	CN	CN	CN	ON	CN	CN	CN					)
	270	QN	C N		CN	0 N	ON	NRO106	QN	ON	ON	ON	ON	ON	ON	NON	ON	ON	CN	CN	CN	CN	CN N	
-	240	QN	ON	CN	ON	0 Z	NR0104	NR0106	ON	ON N														
potimizatio	210	ON	ON	ON	ON	0 Z	NRO106	ON	NO	ON	NO	ON	ON	ON	ON	ON								
m noise o	180	N	ON	ON	ON	ON	NRO106	NRO106	NO	ON	ON	ON	ON	ON										
ith Far	150	No	NO	NO	NON	NON	NON	NO	NO	ON	NO	NON	NO	NO	NON	NO	NO	NO	ON	NO	NO	NO	NON	
irbine 4 w	120	QN	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	NO	ON							
des for tu	8	QN	NO	ON	0N N	ON	ON	ON	NO	ON	ON	NO	ON	ON	ON	NO	ON	ON	ON	NON	NO	NO	0N N	
NRO mo	8	NO	ON	NO	NO	NO	<b>NRO106</b>	NO	NO	ON	NO	ON												
	ŝ	N	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	().
	_ •	NO	ON	NO	NO	ON	NO	NRO106	NO	ON	NO	ON												
	/ind Direction [* Wind speed @ MM @ highest HH [m/s]	3,0	4,0	5,0	6,0	7,0	8,0	9,0	10,0	11,0	12,0	13,0	14,0	15,0	16,0	17,0	18,0	19,0	20,0	21,0	22,0	23,0	24,0	0 30

	922 925	N	ON S		ON	ON	O Z	o c		ON	ON	NO	NO	NO	NO	NO	NO	NO	ON S	S S	O O Z		330	QN		0 N	ON	ON	NO	ON	O Z	O C	0 N	ON	NO	0 N	O Z		C N	O N	ON	NO	ON S	S			
	ş	NO	ON S	N N	ON	ON	ON C		CN CN	ON N	ON	ON	ON	NO	ON	NO	ON	ON	ON A		0 Z Z		300	ON	ON ON	ON ON	NO	ON	ON	ON S	oz i	o c	ON N	NO	ON	NO	OZ Z		ON ON	ON	NO	ON	ON S	S			
į	Ş	Q	ON S		ON	NRO103	NR0104	NNC 106		0 N	ON	NO	NO	ON	ON	ON	0 Z	O I	C C		ON ON		270	ON	ON ON	ON N	NO	NO	NRO104	NRO105	NRO106	D C	NON	NO	NO	0 Z	o d		0 Z	ON	NO	ON	O Z	2			
5	₹	NO	ON ON		NRO102	NRO102	NRO103	SULCHUS NO	ON N	ON	ON	NO	ON	ON	ON	ON	OZ S	ON S			ON N	c	240	ON	ON	ON	NO	NO	NRO103	NR0104	NK0106	D OZ	ON	ON	ON	ON S		CN CN	ON	ON	ON	ON	0 2				
optimizatio	9	NO	O Z		ON	NRO103	NRO104	NO	0 Z	0 Z	ON	ON	ON	ON	ON	0 Z	O Z	o o			ON N	optimizatio	210	ON	ON	ON	ON	ON	NRO103	NRO104	NNO 106		ON	ON	ON	O Z		ON N	ON	0 N	ON	ON	O Z	2			
m noise	3	No	ON N	ON ON	0N N	NR0104	NRO105	D N	ON	N	ON	ON	ON	NO	OZ	0 Z	oy o	OZ Z			ON N	m noise	180	ON	0 Z	ON	ON	ON	NR0106	NRO105		o N	NO	NO	NO	ON S		0 N	0N	0 N	NO	0N	ON N	2			
	8	No			0 N	S S			0 Z	0N	0 Z	0N N	ON	0 N	0 Z	oz :	o z				0 Z	h Fan	150	Q	0 N	0N N	0N N	0N	0 N	og g		D N	NO	0 Z	0 Z	o z		0 Z	0 N	0 N	0 Z	0 Z		2			
	3	NO	ON N	0 Z	ON	ON	NKUTU6	N N	0 Z	ON	ON	ON	ON	0N	oz :	oz :				ON N	0 Z	bine 2 wit	120	ON	N	ON	ON	0N N	0 Z	0 2 2		o N	ON	ON	0 Z	o d	C Z	ON N	ON	ON	ON	ON S		2			
	;	NO	O Z	0 N	ON	NRO103	NPO106	ON	0N N	ON	ON	ON	ON	ON	O Z	O Z	O Q	C S		0 N	ON N	des for tur	6	N	0N N	ON	NO	0 N	NR0104	NRO106		0 Z	ON	ON	ON S	o d		ON	NO	NON	NO	o d		)			
		NO	o c	0 N	NRO102	NRO102	NRO105	ON	ON	ON	ON	ON	ON	ON	o c	0 2				ON	ON	NRO mo	60	NO	NO	NO	ON	ON	NRO103	NPO104	ON	0 N	ON	0 N	OZ S	o d		ON	ON	ON	0 Z	o c	o c				
ę		ON		ON	ON	NRO103	NRO106	NO	ON	ON	ON	ON	ON	0 N	oy o				ON ON	ON	ON		30	ON	NO	ON	ON	Q	NRO103	NRO106	ON	ON N	ON	ON	ON C		0 N	ON	NO	ON	0 N	o d	C Z				
		ON S	0 C Z Z	0N	ON	NPO104	COLONN	0 N	ON	ON	ON	0 N	0 Z	OZ I					0 N	0N N	ON		_ 0	NON	ON	ON	ON	0Z	NRO104	CN CN		ON N	ON	0 N	o c		0 N	ON	ON	NO	ON I	o g	ON ON	C.I.F. B-8703	16760		
Wind Direction [* Wind speed @	MM @ highest HH [m/s]	3,0	5.D	6,0	7,0	0 <sup>0</sup> 0	10.0	11,0	12,0	13,0	14,0	15,0	16,0	17,0	18,0	30.0	21.0	0'1 Z	23.0	24,0	25,0		Wind Direction [" Wind speed @ MM @ highest HH [m/s]	3,0	4,0	5,0	6,0	7,0	0'0	9,U 10.0	11.0	12,0	13,0	14,0	15,0	10,01	18,0	19,0	20,0	21,0	22,0	23.0 34.0	10 25.0	GPC global powe	generation oria y Desarr	ulo de George	" "Bojón

			NRO mo	des for turb	ine 5 w	th Far	m noise (	optimizatio	-			
wing Direction [ Wind speed @ MM @ highest HH [m/s]	_ 0	30	09	6	120	150	180	210	240	270	300	330
3,0	NON	NO	N	NO	0X	Ŋ	N	NO	NO	No	ON	ON
4,0	NO	NO	NO	NO	ON	NO	ON	NO	NO	ON	ON	ON
5,0	NO	NO	ON	NO	NO	NO	NO	NO	NO	ON	ON	ON
6,0	NO	NO	ON	NO	NO	ON	NO	NO	NO	ON	ON	ON
7,0	NO	NO	ON	NO	0N N	NO	NO	NO	ON	ON	ON	ON
8,0	NR0104	NRO104	NRO104	NRO106	NO	0N N	NRO104	<b>NRO104</b>	<b>NRO104</b>	NRO104	ON	ON
0'6	NRO105	NRO105	NRO105	NRO106	0N N	0N	NRO105	<b>NRO105</b>	<b>NRO105</b>	<b>NRO106</b>	ON	NO
10,0	NO	NRO106	ON	ON	NO	NO	ON	<b>NRO106</b>	NO	ON	ON	ON
11,0	NO	NO	ON	NO	ON	0N	NO	ON	NO	NO	ON	ON
12,0	NO	NO	ON	ON	NO	NO	NO	ON	NO	NO	ON	ON
13,0	NO	NO	ON	ON	ON	NO	NO	NO	NO	NO	ON	ON
14,0	NO	NO	ON	ON	ON	NO	NO	NO	NO	NO	ON	ON
15,0	0 N	NO	ON	NO	0N	NO	NO	NO	NO	NO	ON	ON
16,0	NO	NO	ON	ON	ON	NO	ON	NO	NO	ON	ON	ON
17,0	0 N	NO	ON	ON	NO	NO	NO	ON	NO	ON	ON	ON
18,0	ON	NO	ON	ON	ON	NO	NO	NO	NO	NO	NO	ON
19,0	NO	NO	ON	ON	NO	NO	NO	NO	NO	NO	ON	ON
20,0	NO	NO	ON	ON	NO	NO	NO	NO	NO	NO	ON	ON
21,0	NO	NO	ON	NO	ON	NO	NO	NO	NO	ON	ON	ON
22,0	NO	NO	ON	ON	ON	NO	NO	NO	NO	ON	0 N	ON
23,0	NO	NO	ON	ON	ON	ON	NO	NO	NO	NO	ON	ON
24,0	NO	NO	0N N	ON	NO	ON	NO	ON	NO	NO	0N N	ON
25,0	ON	ON	NO	NO	0N	NO	NO	ON	ON	ON	ON	ON

			NRO mod	es for tur	bine 6 wi	th Fan	n noise o	ptimizatio	c			
Vind Direction [°									が正規に行われた			
Wind speed @ MM @ highest HH [m/s]	0	30	60	8	120	150	180	210	240	270	300	330
3,0	NO	No	NO	NO	NO	No	Q	N	ON	ON	ON	CN
4,0	NO	NO	NO	NO	NO	NO	NO	ON	ON	ON	ON	ON
5,0	NO	ON	ON	NO	ON	NO	ON	ON	NO	NO	ON	ON
6,0	NO	NO	NO	NO	0N N	NO	ON	NO	ON	ON	ON	CN
7,0	NO	ON	NO	NO	0N N	NO	NO	ON	ON	ON	ON	ON
8,0	NR0106 N	<b>NRO106</b>	<b>NRO106</b>	ON	ON	No	<b>NRO104</b>	NRO104	<b>NRO106</b>	NO	NO	ON
9,0	NR0106	NO	NRO106	NO	NO	NO	<b>NRO106</b>	NRO106	NRO106	ON	ON	ON
10,0	NO	ON	ON	NO	NO	ON	NO	ON	ON	ON	ON	ON
11,0	NO	ON	NO	NO	ON	0N	ON	ON	NO	ON	ON	ON
12,0	NO	ON	NO	NO	ON	0N N	ON	ON	NO	ON	ON	ON
13,0	NO	NO	ON	NO	NO	0N N	ON	ON	NO	ON	ON	ON
14,0	NO	ON	ON	NO	ON	0N N	ON	ON	NO	ON	ON	ON
15,0	NO	ON	ON	ON	ON	NO	ON	ON	NO	ON	ON	ON
16,0	ON	ON	ON	ON	ON	0N N	ON	ON	NO	ON	ON	ON
17,0	NO	ON	ON	ON	NO	0N N	NO	ON	NO	ON	ON	ON
18,0	NO	ON	ON	ON	ON	NO	ON	ON	NO	ON	ON	ON
19,0	NO	NO	NO	ON	ON	NO	ON	ON	NO	ON	ON	ON
20,0	NO	NO	NO	NO	NO	NO	ON	NO	NO	ON	ON	ON
21,0	NO	NO	NO	NO	NO	0N	ON	NO	ON	ON	ON	CN
22,0	NO	NO	NO	ON	ON	NO	NO	ON	ON	ON	ON	CN
23,0	NO	ON	NO	NO	NO	NO	NO	ON	ON	ON	ON	CN
24,0	ON	ON	ON	ON	0N	NO	ON	ON	NO	ON	ON	ON
25,0	NO	NO	ON	ON	ON	NO	ON	ON	NO	ON	NO	ON

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'7's

C.I.F. B-87026

Gas Natur

	Concession of the local division of the loca				M / DI 10	In L a	DOING IN	opurnizano				
Wind Direction	ຍ											
MM @ highes HH [m/s]	0 0	R	8	6	120	150	180	210	240	270	30	330
3,0	NO	NO	NO	N	QN	ON	No	ON	ON	ON	QN	Q
4,0	NO	NO	ON	NO	NO	NO	NO	0N N	ON	ON	CN	
5,0	NO	NO	NO	NON	ON	NO	NO	ON	ON	ON	CN	CN
6,0	NO	NO	ON	NO	NO	ON	0N N	0 N	ON	CN	CN	
7,0	NO	NO	ON	NO	ON	NO	NO	ON	ON	ON	ON N	
8,0	NRO104	NRO103	<b>NRO103</b>	<b>NRO103</b>	ON	NO	NR0104	NRO104	NRO103	NRO103	ON	ON N
0'6	NRO105	NR0104	NR0104	<b>NRO104</b>	ON	NO	NR0105	NRO105	NRO104	NRO104	ON	CN
10,0	NO	NRO106	<b>NRO106</b>	<b>NRO105</b>	NON	ON	ON	NRO106	NRO106	NR0106	ON	CN
11,0	NO	NO	NO	ON	ON	N	NO	ON	ON	ON	ON	CN
12,0	NO	ON	NO	NO	0N N	NO	NO	ON	ON	ON	ON	CN
13,0	NO	NO	NO	NON	ON	NO	NO	NO	ON	ON	ON	CN
14,0	NO	NO	NO	NON	0N N	NO	NO	ON	ON	ON	ON	CN
15,0	NO	NO	NO	NO	ON	NO	ON	NO	ON	NO	ON	CN
16,0	NO	NO	NO	NO	NO	NO	ON	NO	ON	ON	ON	CN
17,0	NO	NO	ON	NO	ON	NO	ON	NO	ON	ON	ON	ON
18,0	NO	NO	NO	NO	NO	NO	ON	NO	NO	NO	NO	ON
19,0	NO	NO	NO	NO	NO	NO	ON	NO	NO	ON	ON	ON
20,0	NO	ON	NO	NO	NO	NO	NO	NO	ON	NO	ON	CN
21,0	NO	NO	NO	NO	NON	NO	NON	NO	ON	NO	ON	CN
22,0	NO	ON	ON	NO	ON	NO	NO	NO	NO	NO	ON	CN
23,0	NO	NO	NO	NO	ON	NO	NO	NO	NO	NO	ON	CN
24,0	NO	NO	NO	NO	NO	NO	NO	NO	ON	NO	ON	ON
25,0	ON	NO	ON	NO	NO	ON	NO	ON	ON	ON	NO	ON

NRO modes for turbine 8 with Farm noise optimization

		Contraction of the local distance			M O DIII	In Lat	I LIOISE O	pumizatio				
Wind Direction ["]												
Wind speed @ MM @ highest	•	30	99	6	120	150	180	210	240	270	300	330
HH [m/s]			「「「「「「」」」」」」								時代に見てい	
3,0	NO	ON	ON	NO	Q	NO	NO	NO	NO	NO	NO	NO
4,0	NO	ON	NO	NO	NO	ON	ON	NO	NO	NON	ON	ON
5,0	ON	ON	NO	NO	NO	ON	ON	NO	ON	ON	ON	C
6,0	ON	ON	NO	NO	NO	ON	ON	ON	ON	ON	CN	CN
7,0	NO	NO	NO	NO	NO	ON	ON	ON	ON	CN	CN N	
8,0	NRO104	<b>NRO103</b>	<b>NRO103</b>	NRO103	NO	NON	IRO106	NRO104	NRO104	NRO104	CN	
9,0	<b>NRO106</b>	<b>NRO104</b>	<b>NRO104</b>	NRO104	NO	NO	IRO106 1	NRO105	NRO105	NRO105	CN	
10,0	ON	<b>NRO106</b>	<b>NRO106</b>	<b>NRO106</b>	NO	NO	NO	NO	ON	NRO106	ON	C N
11,0	ON	ON	NO	ON	ON	ON	NO	ON	ON	ON	ON	CN
12,0	ON	ON	ON	NO	NO	ON	NO	NO	ON	ON	ON	CN
13,0	ON	ON	NO	NO	ON	ON	NO	ON	ON	ON	ON	CN
14,0	ON	ON	ON	NO	NO	NO	NO	NO	ON	ON	ON	ON
15,0	-ONGa	NO	NO	NO	ON	ON	ON	ON	NO	NON	ON	ON
16,0 : 201	NO	ON	NO	NO	NO	NO	NO	NO	NO	NO	ON	ON
17,0,71	NO	NON	NO	NO	NO	ON	ON	NO	NO	NO	NO	NON
18,0' 0'a	ON	ON N	NO	NO	ON	ON	ON	ON	NO	NO	ON	ON
10,00 sa li sa li	ON	E.ON	NON	NO	NO	NO	ON	ON	NO	NO	ON	0N N
ngel 50.0	NON-	NO	ON	NO	NO	NO	NO	NO	NO	NO	NO	ON
21,0	ON	ON	ON	NO	NO	NO	NO	NO	NO	NO	NO	ON
22,0 8	ONgen	ON	Q 676	NO	NO	NO	NO	NO	NO	NO	ON	NON
23,0	ON	ON	ON:	NO	NO	ON	NO	ON	NO	ON	ON	ON
24,0	Q.	d	ON.	NO	NO	ON	ON	ON	NO	NO	NO	ON
25,0 5	0 Z	NO	ON.	NO	NO	0N N	NO	ON	NO	NO	ON	ON
	000											
	"ación	. S.L.										
	/											

NRO modes for turbine 7 with Farm noise optimization

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	330	No	ON	NO	ON	NO	ON	NO	ON	ON	ON	ON	ON	ON	ON	ON	NO	ON	NO	NO	NO	ON	ON	NO
	300	NO	NO	NO	0N N	NO	NRO106	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	270	NO	ON	ON	ON	ON	NRO104	NRO105	ON	NO	NO	NO	ON	NO	ON	ON	ON	NO						
-	240	N	NO	NO	NO	NO	<b>NRO104</b>	<b>NRO106</b>	<b>NRO106</b>	NO	NO	NO	NO	NO	NO	NO	ON	NO	NO	NO	NO	NO	ON	ON
optimizatio	210	NO	NO	ON	NO	NO	NRO104	NRO105	NRO106	NO	NO	ON	NO	NO	NO	NO	NO	NO	NO	NO	NO	ON	NO	ON
m noise o	180	N	ON	NO	ON	NO	<b>NRO106</b>	<b>NRO106</b>	ON	NO	NO	NO	NO	ON	ON	NO	ON	NO						
h Far	150	0N	0N	0N	0N	NO	NO	0N	0N	NO	0N	NO	0N	0N N	0N N	0N	NO	No	No	No	No	Q	0N	NO
bine 9 wit	120	NO	NO	ON	NO	NO	ON	NRO106	ON	ON	ON	ON	ON	ON	ON	ON	ON	NO	NO	NO	ON	ON	ON	ON
des for tur	8	NO	ON	ON	ON	ON	<b>NRO103</b>	<b>NRO104</b>	<b>NRO106</b>	NO	NO	NO	NO	ON	ON	ON	ON	NO	NO	NO	NO	NO	ON	ON
NRO mo	8	ON	NO	ON	NO	ON	NRO104	<b>NRO106</b>	NO	NO	NO	NO	ON	ON	NO	ON	NO	NO	NO	NO	NO	NO	ON	ON
/	9	NON	NOC	-ON-u	NO	ON	NRO104	<b>NRO106</b>	<b>NRO106</b>	ON	ON	NO	ON	ON	ON	ON	ON	NO	NO	NO	NO	NO	ON	NO
-8703676	_ 0	neration NO	NO	SarrolNOse G	NO	ON	NR0106	NRO106	ON	ON	NO	NO	ON	ON	ON	ON	NO	ON	ON	NO	NO	NO	NO	NO
C.I.F.B	Nind Direction [* Wind speed @ MM @ highest HH [m/s]	8 3, Bower ger	0,40 U	5 Oria y Des	6,0	7,0	8,0	0'6	10,0	11,0	12,0	13,0	14,0	15,0	16,0	17,0	18,0	19,0	20,0	21,0	22,0	23,0	24,0	25,0

NRO modes for turbine 1NO with Farm noise optimization

Wind Direction [	•		「日本の日本」	の行いたのである			South States of the local division of the lo		the of the second s			Contraction of the local division of the loc
Wind speed @ MM @ highest HH [m/s]	. •	õ	09	8	120	150	180	210	240	270	300	330
3,0	NO	NO	NO	NO	NO	No	NON	ON	ON	ON	ON	ON
4,0	NO	ON	ON	NO	ON	NO	NO	ON	ON	ON	ON	ON
5,0	NO	ON	ON	NO	ON	ON	NO	NO	NO	ON	ON	OZ
6,0	ON	ON	ON	NO	ON	ON	ON	ON	ON	ON	0N N	ON
7,0	NRO101	<b>NRO100</b>	NRO100	NRO100	ON	NO	IR0102	NRO100	NRO100	NRO101	NO	ON
8,0	NRO101	<b>NRO100</b>	NRO101	NRO101	NRO106	SRO1( N	IR0104	NRO101	NRO101	NRO102	NRO106	NRO103
9'0	NRO101	NRO101	NR0101	<b>NRO102</b>	NRO104	FRO1( N	IRO103	<b>NRO102</b>	<b>NRO102</b>	NRO103	NRO104	NRO103
10,0	<b>NRO102</b>	<b>NRO102</b>	<b>NRO102</b>	<b>NRO103</b>	NRO104	FO1( )	IR0102	NRO102	<b>NRO102</b>	NRO104	NRO105	NR0104
11,0	<b>NRO103</b>	<b>NRO104</b>	<b>NRO104</b>	<b>NRO105</b>	NRO105	5RO1( N	IRO103	NRO104	NRO104	<b>NRO105</b>	NRO106	NRO105
12,0	NRO104	NRO104	<b>NRO104</b>	NRO104	NRO105	5RO1( )	IR0104	NRO104	NRO104	<b>NRO105</b>	NR0106	NRO105
13,0	<b>NRO105</b>	<b>NRO105</b>	<b>NRO104</b>	NO	NRO106	SRO1( N	<b>IRO105</b>	NRO104	NRO106	NRO105	NO	NRO105
14,0	NO	NO	ON	ON	ON	ON	NO	NO	NO	NO	ON	ON
15,0	ON	ON	ON	ON	ON	NO	NO	NO	ON	NO	ON	NO
16,0	ON	ON	ON	ON	ON	NO	ON	NO	NO	NO	ON	NO
17,0	ON	ON	ON	NO	ON	NO	ON	ON	NO	NO	NO	NO
18,0	NO	ON	NO	ON	ON	NO	ON	NO	ON	ON	ON	ON
19,0	ON	NO	ON	ON	ON	0N N	ON	NO	NO	NO	ON	OZ
20,0	NO	NO	ON	NO	on	NO	NO	NO	NO	ON	NO	NO
21,0	ON	NO	ON	NO	NO	NO	ON	NO	NO	NO	NO	NO
22,0	NO	NO	NO	NO	NO	NO	NO	NO	NO	ON	ON	ON
23,0	NO	NO	NO	NO	ON	NO	ON	NO	NO	NO	NO	NO
24,0	ON	ON	ON	NO	ON	NO	ON	NO	NO	ON	NO	ON
25,0	NO	NO	NO	NO	NO	NO	ON	ON	NO	ON	ON	ON

D2V

DSA LS

ON		09	06	120	150	180	210	240	270	300	330
	ON ON	N N		N N	o c z z	o o	o o	o oz	O C	ON N	ON N
ON ON ON ON ON	ON ON	ON N		ON N	0 Z	ON A	ON ON	ON S	0 Z	ON N	ON N
ON ON ON	ON	ON ON		N N	0 Z	o N		o o z	o c	o c	o v
NO NRO106 NRO106 NO	NRO106 NO	NO		NO	NO	IRO106	NRO104	NRO103	NRO104	0 N	ON N
				o z	o z	ON S	NRO106	NRO104	NRO106	ON	ON
ON ON ON ON								NRO106	o d	0 0	ON S
NO NO NO	NON	ž	0	NO	NON	ON N	ON N	0 Z	ON ON		
N ON ON ON	N ON	ž	0	NO	0N N	NO	N	0N N	0 N	0 Z	ON ON
N ON ON ON	N N	ž.	0	NO	NO	NO	NO	ON	ON	ON	N
		Z Z	5 0				o d	OZ Z	ON S	0 Z	0N N
ON ON ON	ON	. 2	0	ON N							o c
N ON ON ON	NON	Z	0	0 N	0 N	o N					
N ON ON ON	NON	Z	0	NO	NO	ON	ON	ON	0 N	ON ON	
N ON ON ON	NON	Z	0	NO	NO	NO	NO	NO	NO	ON	ON
ON ON ON	N N N	Z	0	NO	NO	N	ON	NO	N	ON	ON
		Z Z	0 0	on a	oz a	on s	0 Z	NO	ON	ON	NO
		< 4	2 0	o c	oz i	Q I	OZ	ON	NO	NO	ON
		2 2						o Z	ON C	ON S	0 Z
							opumizau				
9 30	6 99	•	9	120	150	180	210	240	270	300	330
NO NO NO	ON	-	9	NO	No	No	NON	Q	QN	ON	Q
ON	ON		NO	NO	NO	NO	ON	NO	N	ON	0 N
NO NO	OZ :		9	0 Z	ON	NO	ON	NO	ON	ON	0N N
		ZZ	0 0	ON A	ON C	ON S	O Z	ON	ON	ON	ON
NO NRO106 NRO106 N	NRO106 N	ŻŻ				NO BO106	ND	ON	ON	ON S	0 N
NO NO NO	ON	ž	0	ON N	o N	ON	NR0105	NRO105	NRO106	o n	o o
NO NO NO NO	NO NRC	NRC	106	ON	NO	N	ON	NON	NRO106	ON N	0 N
NO NO NO	N N	ž	0	ON	NO	ON	ON	NO	NO	NO	ON
		Z	0 0	ov s	S S	0 N	ON	NO	ON	ON	ON
		žŻ	2 0	ON C	ov i	o i	ON	ON	ON	ON	NO
							ov a	ON S	ON S	ON	ON
									ov :	ON 1	ON
CN CN ON ON									ON S	0 N	0 N
ON ON ON	ON	ž	0	CN						S S	o i
NO NO NO	N ON	Ż	0	ON N	o N						o d
NO NO	NO	-	9	NON	o N	o N	0 N	ON ON		D N	
ON ON ON	ON		NO	NO	NO	N	ON	ON	ON N	0N	
ON ON ON	ON S	~	9	NO	NO	ON	ON	NO	NO	NON	NON
		2 2	2 0		ON N	oz a	ON S	ON .	NO	NO	NO
		< .	2 (	NC NC	NC	Q I	OZ I	ON	ON	NO	NO
	SC	6	S	ON	ON	0N N	ON	NO	NO	ON	ON

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Munta         No	HH (m/s) 3,0 4,0 5,0 6,0	est o	õ	8	6	120	150	180	210	240	270	300	
40         N0         N0<	4,0 5,0	ON	No	No	Q	QN	CN	g	Q	Q	Q	Q	
50         NO         NO<	5,0	NO	NO	ON	ON	ON N	oz oz	N N	0 N				
50         NO         NO<	6.0	ON	ON	ON	ON	NO	NO	NO	ON	0 N	ON N	ON	
7.0         NH20101         NH201011         NH201011         NH20101		ON N	ON	ON	NO	ON	NO	NO	ON	ON	NO	NO	
	0,7	NRO101 NRO102	NRO101	NPO100	NRO100	NRO100	RO11	VR0101	ON	NRO100	NRO100	NRO101	Z
	0.6	NRO103	NR0103	NRO102	NRO102	NPOTORN	PO110	ULOUN	NRO106	NPO101	NRO101	NR0102	z
110         NRO105 NRO106         NRO103 NRO106         NRO104 NRO106 NRO10 NRO10 NRO10 NRO100 NRO106 NRO10 NRO100 NRO106 NRO106 NRO106 NRO10	10,0	NRO103	NR0104	NRO103	NRO102	NR0101	RO11	ARO103	NRO104	NPO103	NPO104	NPO102	Z 2
120         NRO104         NRO105         NRO105 <td>11,0</td> <td>NRO105</td> <td>NRO106</td> <td>NRO104</td> <td>NRO103</td> <td>NRO103</td> <td>RO1(1</td> <td>NR0105</td> <td>NRO105</td> <td>NRO104</td> <td>NRO103</td> <td>NPO102</td> <td>ZZ</td>	11,0	NRO105	NRO106	NRO104	NRO103	NRO103	RO1(1	NR0105	NRO105	NRO104	NRO103	NPO102	ZZ
13.0         NR2105         NR2105         NR2105         NR2105         NR2105         NR2104         NR2	12,0	NRO104	NR0106	<b>NRO104</b>	NRO104	NRO103	RO11	VR0104	NRO105	NRO104	NRO103	NPO103	2 2
140         NO	13,0	NRO105	NR0106	<b>NRO105</b>	NRO103	NRO104	RO1(1	NR0104	NO	NRO103	NRO104	NRO104	2 2
150         NO	14,0	NON	ON	ON	ON	ON	QN	QN	0N N	ON	CN	CN	-
160         NO	15,0	NON	ON	NO	NO	ON	NO	0N	ON	ON	0X	ON N	
170         NO	16,0	NO	NO	ON	NO	ON	ON	NO	ON	ON	ON N	CN	
18:0         NO         N	17,0	ON	ON	ON	ON	ON	0N	NO	NO	ON	ON N	0 N	
130         NO	18,0	NO	NO	ON	0N	ON	NO	NO	NO	ON	ON	ON	
200         NO	19,0	ON	NO	NO	ON	ON	NO	ON	NO	ON	ON	NON	
210         NO	20,0	NO	NO	NO	ON	ON	NO	NO	NO	ON	NO	ON	
22.0         NO         N	21,0	ON	NO	NO	ON	ON	ON	NO	NO	ON	ON	ON	
23.0         NO         N	22,0	Q	NO	NO	NO	ON	NO	NO	NO	ON	NO	ON	
24,0         NO         N	23,0	Q	NO	ON	NO	ON	ON	ON	NO	ON	ON	ON	
25.0         NO         N	24,0	ON	ON	NO	NO	ON	ON	ON	NO	ON	NO	NO	
Wind Direction (7)         NRO modes for turbine 12 with Farm noise optimization           Wind Speed ©         30         50         120         120         130         240           Wind Speed ©         31         NO	25,0	Q	N	N	NO	ON	NO	NO	NO	ON	NO	NO	
3,0         NO	Vind Directio Wind speed MM @ highe HH [m/s]	n[] @ 0 sst 0	8	8	6	120	150	180	210	240	270	300	
4,0       N0       N0 <t< td=""><td>3,0</td><td>N</td><td>N</td><td>No</td><td>QN</td><td>QN</td><td>QN</td><td>Q N</td><td>ON</td><td>QN</td><td>CN</td><td>QN</td><td></td></t<>	3,0	N	N	No	QN	QN	QN	Q N	ON	QN	CN	QN	
5.0         NO	4,0	NO	ON	ON	NO	ON	ON	0N N	0N N	ON	O N	ON	
5.0         NO	5,0	NO	ON	NO	ON	ON	ON	ON	NO	ON	ON	0 Z	
7/0         NO	6,0	ON	NO	NO	ON	ON	NO	ON	ON	ON	NON	ON	
9.0         NO         NECTOD	0'/	ON 2	ON	ON	ON	ON S	ON	<b>JRO102</b>	ON	ON	ON	ON	
10.0         NRC105         NRC105 <td></td> <td></td> <td></td> <td>NKUTU6</td> <td>NHO106</td> <td>ON</td> <td>RO1(</td> <td>NR0104</td> <td>NR0104</td> <td>ON</td> <td>Q</td> <td>NRO104</td> <td></td>				NKUTU6	NHO106	ON	RO1(	NR0104	NR0104	ON	Q	NRO104	
11.0       N0       NR0105       N0       NR0105       N0         12.0       N0       NR0105       N0       NR0105       N0       N0         13.0       NR0105       N0       N0       N0       N0       N0       N0         13.0       NR0105       N0       N0       N0       N0       N0       N0       N0         13.0       NR0105       N0	10,0	NRO105	NR0106	NRO105	NRO105	NRO105	RO10	ARO106	NRO106	NO	NRO106	NRO106	
12.0       NO       <	11,0	ON	NR0106	ON	ON	ON	CN	JRO106	ON			SULUXN	2 4
13.0       MR0108       N0         13.0       MR0108       N0         14.0       N0       N0         15.0       N0       N0         14.0       N0       N0         15.0       N0       N0         N0       N0 <td>12,0</td> <td>NO</td> <td><b>NRO106</b></td> <td>NO</td> <td>NRO106</td> <td>0N N</td> <td>0N N</td> <td>ON</td> <td>ON N</td> <td>ON N</td> <td></td> <td>NRO106</td> <td>2 2</td>	12,0	NO	<b>NRO106</b>	NO	NRO106	0N N	0N N	ON	ON N	ON N		NRO106	2 2
14.0         15.0         16.0         16.0         16.0         16.0         16.0         16.0         16.0         16.0         16.0         16.0         16.0         16.0         16.0         17.0         18.0         19.0         10.0         10.0         11.0 <t< td=""><td>13,0</td><td>NRO106</td><td>ON</td><td>NO</td><td>ON</td><td>NRO106</td><td>NO</td><td>0 N</td><td>ON</td><td>NRO106</td><td>0 N</td><td>NR0106</td><td>-</td></t<>	13,0	NRO106	ON	NO	ON	NRO106	NO	0 N	ON	NRO106	0 N	NR0106	-
12:00       No	14,0	NO	ON	NO	ON	ON	ON	ON	NO	ON	NO	N	
$ \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \begin{array}{c} \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} $	15,0	ON N	ON	0 N	0N	ON	NO	ON	NO	ON	ON	ON	
1       1	16,0	OZ	ON	ON	0N	ON	ON	ON	NO	ON	NO	ON	
No       No <td< td=""><td>5 17,0.</td><td>Q I</td><td>0 Z</td><td>ON</td><td>NO</td><td>ON</td><td>NO</td><td>0N N</td><td>NO</td><td>ON</td><td>ON</td><td>ON</td><td></td></td<>	5 17,0.	Q I	0 Z	ON	NO	ON	NO	0N N	NO	ON	ON	ON	
	18,0		ON C	oz i	oy i	0 Z	0N	0 Z	NO	ON	NO	ON	
	0,81	DN ON			ov o	oz i	ov i	0 Z	0 N	ON	ON	NO	
N N N N N N N N N N N N N N N N N N N		ON 8				0 Z		ON A	ON C	ON S	0 N	ON	
NO N	22.0	105	ON	ON ON							ON C	o o	
NO N	0 EZ	GR P	ON	o N	ON N	ON ON	ON ON		D C	N N	S S		
N ON	0,424,0	No.	NO	NO	QN	ON N	ON N	NON	ON N	) N	) N	) N	
	0.90	ON	NO	NO	ON	NO	ON	NO	NO	ON N	ON	NON	

Mind Dimotion [8]			NRO mod	des for turl	bine 17 v	vith Far	m noise	optimizatio	u			
Wind Speed @ MM @ highest HH [m/s]		30	09	6	120	150	180	210	240	270	300	330
3,0	NO	NO	NO	NO	N	No	Q	No	NO	QN	QN	CN
4,0	ON	NO	ON	ON	NO	NO	ON	ON	ON	ON	ON	CN
5,0	ON	NO	ON	ON	NO	NO	ON	ON	ON	ON	CN	CN
6,0	NO	NO	ON	ON	ON	NO	ON	ON	NON	ON N	ON	ON
7,0	NO	ON	ON	NO	ON	NO	NO	ON	NO	ON	ON	ON
8,0	0 N	NRO104	NRO106	NRO106	ON	RO1( h	<b>JRO106</b>	<b>NRO106</b>	<b>NRO104</b>	<b>NRO104</b>	<b>NRO106</b>	ON
0'6	0 N	NRO105	NRO106	NO	NRO106	NON (	ON	ON	<b>NRO106</b>	<b>NRO106</b>	ON	ON
10,0	0 Z	NRO106	NRO106	NRO105	NRO106	SR01(	ON	<b>NRO106</b>	<b>NRO106</b>	NRO105	NRO106	NRO106
11,0	ON	<b>NRO106</b>	ON	NRO106	NO	NO	ON	ON	NO	ON	ON	ON
12,0	ON	NRO106	ON	<b>NRO106</b>	ON	NO	ON	NO	NO	ON	ON	ON
13,0	ON	NO	ON	NO	NO	NO	ON	NO	<b>NRO106</b>	ON	ON	ON
14,0	0N	NO	NO	ON	NO	NO	ON	NO	ON	ON	ON	ON
15,0	ON	NO	ON	NO	NO	NO	ON	NO	NO	ON	ON	ON
16,0	NO	NO	ON	NO	ON	0N N	ON	ON	NO	ON	ON	ON
17,0	0N N	ON	ON	NO	ON	NO	ON	ON	NO	ON	NON	ON
18,0	0N	NO	NO	NO	ON	NO	ON	NO	NO	ON	ON	ON
19,0	0N	NO	ON	NO	ON	NO	ON	ON	NO	ON	NO	0N
20,0	0N	NO	ON	NO	NO	NO	ON	NO	ON	ON	NO	ON
21,0	ON	NO	NO	NO	NO	NO	ON	NO	NO	ON	NO	ON
22,0	ON	NO	ON	NO	NO	NO	ON	NO	NO	ON	ON	ON
23,0	NO	ON	ON	NO	NO	NON	ON	NO	ON	ON	ON	ON
24,0	ON	ON	ON	NO	ON	ON	ON	NO	NO	ON	ON	ON
25,0	NO	ON	NO	NO	NO	NO	NO	NO	NO	0 Z	NO	ON

Wind Direction ["]			NRO mode	es for turt	bine 18 v	vith Farr	n noise (	optimizatio	u			
Wind speed @ 0 MM @ highest HH [m/s]		9	8	8	120	150	180	210	240	270	300	330
3,0	N	ON	NO	N	N	Q	No	ON	QN	ON	CN	QN
4,0	ON	NO	ON	NO	NO	ON	ON	ON	ON	ON	CN	ON ON
5,0	NO	ON	ON	NO	NO	NO	ON	ON	ON	ON	ON	C N
6,0	NO	ON	ON	NO	NO	NO	ON	ON	ON	ON	ON	CN
7,0	0N	ON	NO	NO	NO	ON	ON	ON	ON	ON	ON	CN
8,0	0N	NRO106	NRO106	ON	NO	RO1( N	IR0106	NRO106	NRO105	NRO106	NRO106	NR010
0'6	0N	<b>NRO105</b>	NRO106	NO	NO	ON	ON	NO	ON	ON	ON	ON
10,0	0N	ON	NRO106	NO	ON	ON	ON	NO	NRO106	<b>NRO106</b>	NRO106	NR010
11,0	NO	ON	NO	NO	NO	ON	ON	NO	ON	ON	ON	QN
12,0	ON	ON	NO	NO	ON	ON	ON	ON	NO	ON	ON	ON
13,0	NO	NO	NO	NO	ON	ON	NO	NO	NO	ON	NON	NON
14,0	NO	NO	NO	NO	NO	ON	NO	NO	NO	ON	NO	ON
15,0	ON	ON	NO	NO	ON	ON	ON	NO	ON	ON	ON	0 Z
16,0	NO	ON	NO	NO	ON	NO	NO	ON	NO	ON	NON	No
17,0	ON	NO	NO	NO	NO	0N	NO	NO	NO	ON	NON	ON
18,0	ON	NO	NO	NO	ON	ON	NO	NO	NO	ON	ON	ON
19,0	NO	NO	NO	NO	NO	ON	NO	NO	ON	ON	NO	ON
20,0	NO	NO	NO	0N	NO	ON	NO	NO	ON	ON	NO	ON
21,0	NO	NO	NO	NO	NO	ON	NO	NO	ON	ON	NO	0N N
22,0	0 Z	NO	NO	NO	NO	NO	NO	NO	ON	ON	ON	ON
23,0	NO	NO	NO	NO	NO	ON	NO	NO	NO	ON	ON	ON
24,0	NO	ON	NO	NO	ON	NO	NO	NO	ON	NO	ON	NON
25,0	0N	NO	NO	NO	ON	NO	NO	NO	ON	NO	ON	NON

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/	C.I.F	B-870367	<sup>6</sup> NRO mod	tes for turb	ine 15 v	vith Far	m noise	· optimizatio	u			
Wind Direction [" Wind speed @ MM @ highest HH fm/s1	_ 0	8	09	ß	120	150	180	210	240	270	30	330
3,0,%	am QN Danie	r geiNQtion	ON	o, NO	NO	Q	Q	No	ON	No	No	ON
4,0 -05	ON a line	NO	NOerec	ON	ON	NO	0N N	NO	ON	NO	ON	ON
5,0		y DeNgrollo	de NO.	NO	NO	NO	ON	ON	NO	ON	ON	ON
6,0	ON	ON	NO	NO	NO	NO	NO	ON	ON	NO	ON	ON
7,0	NO	ON	ON	NO	NO	NO	NON	ON	ON	NO	NO	ON
8,0	NO	NRO106	<b>NRO104</b>	NO	0N N	R01(1	<b>NRO104</b>	4 NRO103	<b>NRO103</b>	NRO104	NO	NRO106
0'6	NO	NO	<b>NRO106</b>	ON	NO	NO	NRO106	5 NRO104	<b>NRO104</b>	NRO106	ON	ON
10,0	NO	<b>NRO106</b>	NO	NO	0N N	NO	NON	<b>NRO106</b>	NRO106	ON	NR0106	NRO106
11,0	NO	NO	NO	<b>NRO106</b>	NO	NO	0N N	ON	ON	ON	0N N	ON
12,0	NO	ON	ON	NO	NO	NO	NO	ON	NO	NO	ON	ON
13,0	NRO106	NO	ON	NO	NO	NO	NO	NO	0 N	ON	ON	ON
14,0	NO	ON	ON	ON	0N N	ON	NO	NO	ON	NO	ON	ON
15,0	NO	NO	ON	ON	NO	NO	NO	ON	ON	NO	NO	ON
16,0	NO	NO	ON	ON	NO	ON	NO	NO	ON	NO	NO	ON
17,0	NO	NO	ON	ON	0N N	ON	NO	NO	ON	NO	ON	0N N
18,0	0N	ON	ON	ON	ON	ON	NO	ON	ON	ON	NO	NO
19,0	NO	ON	NO	NO	0N N	0N	NO	NO	NO	NO	ON	ON
20,0	NO	ON	ON	ON	0N N	NO	NO	NO	ON	NO	NO	ON
21,0	ON	ON	ON	ON	0N	NO	NO	NO	ON	NO	ON	ON
22,0	NO	ON	ON	ON	NO	NO	NO	NO	ON	NO	NO	ON
23,0	NO	ON	ON	NO	NO	N	NO	NO	NO	NO	ON	ON
24,0	NO	NO	NO	NO	0N N	NO	NO	NO	NO	NO	NO	ON
25,0	NO	NO	NO	NO	ON	ON	NO	NO	ON	ON	NO	ON

	300 330	ON ON	ON	ON ON	ON ON	ON ON	0106 NRO106	ON ON	0106 NO	ON ON	ON NO	ON ON	ON ON	ON NO	ON ON	NO NO	ON NO	NO NO						
STATES OF A DESCRIPTION	270 3	ON	OZ	ON	OZ	ON	NRO104 NR	NRO106 1	NRO106 NR	NON	NO	ON	NO	NO	NO	ON	NO	ON	ON	ON	NO	ON	NO	
	240	QN	ON	NO	ON	ON	NRO104	NRO105	<b>NRO106</b>	NO														
opumzano	210	NO	NO	NO	ON	ON	NRO103	NRO104	<b>NRO106</b>	ON	ON	ON	ON	NO	ON	NO								
	180	No	ON	NO	NO	NO	<b>JRO104</b>	<b>NRO106</b>	ON	NO	ON	ON	ON	0N	ON	0N	ON							
AILT L GI	150	No	ON	NO	NO	NO	RO1( N	NO	NO	NO	NO	NO	NO	NON	NO	ON								
	120	N	ON	NO	NO	0 N	ON	0N N	NO	0N	ON	0N	0N	ON	NO	NO	ON							
	6	NO	NO	NO	NO	NO	NO	NO	NRO106	NO	NO	NO	NO	ON	NO									
	9	NO	NO	NO	NO	ON	<b>NRO106</b>	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	NO	ON	NO	
のないのないないの	8	NO	ON	ON	ON	ON	ON	<b>NRO106</b>	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	NO	NO	NO	NO	ON	
	•	NO	0 N	0 Z	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	NO	ON	NO	
Wind Direction [9]	Wind Speed @ Wind Speed @ MM @ highest HH [m/s]	3,0	4,0	5,0	6,0	7,0	8,0	9,0	10,0	11,0	12,0	13,0	14,0	15,0	16,0	17,0	18,0	19,0	20,0	21,0	22,0	23,0	24,0	

NRO modes for turbine 16 with Farm noise optimization

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Wind Direction [	5					New York		april 100				
Wind speed @ MM @ highest HH [m/s]	•	8	09	8	120	150	180	210	240	270	300	330
3,0	NO	ON	NO	NO	NO	No	QN	NO	Q	ON	CN	QN
4,0	NO	NO	NO	NO	NO	NO	ON	ON	ON	ON	CN	
5,0	NO	NO	NO	ON	ON	NO	0 N	ON	ON	CN	C N	
6,0	NO	ON	NO	NO	0N	NO	ON	ON	ON	ON	ON	
7,0	NO	NO	NO	NO	NO	NO	NO	ON	NO	ON	CN	CN CN
8,0	NO	NRO104	<b>NRO106</b>	NO	NO	NO	<b>NRO106</b>	<b>NRO104</b>	NRO104	NRO106	ON	CN
0'0	NRO106	5 NRO105	NRO106	ON	ON	NO	ON	<b>NRO106</b>	NRO106	ON	ON	ON
10,0	ON	ON	ON	NO	ON	NO	ON	NO	NO	NO	NO	ON
11,0	NO	NO	ON	NO	NO	NO	ON	NO	NO	ON	ON	ON
12,0	NO	NO	ON	ON	ON	NO	ON	NO	ON	ON	ON	ON
13,0	NO	NO	NO	NO	NO	NO	ON	NO	NO	NO	0N N	ON
14,0	NO	ON	ON	NO	ON	NO	ON	ON	ON	ON	ON	C N
15,0	NO	NO	ON	NO	NO	NO	0N N	NO	ON	NO	ON	CN CN
16,0	NO	NO	ON	ON	NO	NO	ON	NO	NO	NO	ON	CN
17,0	NO	NO	ON	ON	NO	NO	ON	NO	NO	NO	ON	ON ON
18,0	NO	NO	ON	NO	NO	NO	NO	ON	ON	ON	ON	CN
19,0	NO	NO	ON	NO	NO	NO	NO	NO	NO	ON	ON	CN
20,0	NO	NO	ON	ON	NO	ON	NO	ON	NO	ON	CN	CN
21,0	NO	ON	NO	NO	NO	NO	NO	ON	NO	ON	CN	CN
22,0	NO	NO	NO	ON	NO	NO	NO	ON	ON	ON	CN	CN
23,0	NO	NO	NO	ON	NO	NO	NO	ON	ON	ON	CN	C N
24,0	NO	ON	ON	NO	NO	NO	ON	NO	ON	ON	ON	CN
25,0	NO	ON	ON	ON	NO	NO	NO	ON	NO	NO	NO	ON

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0

DSA 15 330 300 
 150
 130
 210
 240
 240
 240

 N0
 N0
 N0
 N0
 N0
 N0
 N0

 N0
 N0
 N0
 N0
 N0
 N0
 N0
 NRO modes for turbine 2NO with Farm noise optimization 120 90 60 30 
 Wind Direction (1)
 Wind Speed (2)

 Wind Speed (2)
 0

 MM (2) highest
 0

 A,0
 NC

 4,0
 NC

 5,0
 NC

 6,0
 NC

 7,0
 NC

 9,0
 NC

 11,0
 NC

 12,0
 NC

 12,0
 NC

 14,0
 NC

 17,0
 NC

 17,0
 NC

 17,0
 NC

 17,0
 NC

 17,0
 NC

 12,0
 NC

 12,0
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 12,0
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 12,0
 NC

 12,0
 NC

 23,0
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	7'S 40	lo <sub>n</sub>
036760	ation	rollo de Gunera
C.I.F. B-87(		<sup>nipria</sup> v Desa
	C.	

			NRO mod	es for tur	bine 21 w	rith Fa	rm noise	optimizatio	u			
Wind Direction [°]												
Wind speed @ MM @ highest HH [m/s]	•	30	60	6	120	150	180	210	240	270	300	330
3,0	NON	NO	NO	NO	NO	Q	Q	ON	NO	ON	ON	CN
4,0	NO	ON	NO	ON	NO	NO	ON	ON	ON	ON	ON	CN
5,0	0N N	ON	NO	ON	ON	ON	ON	ON	ON	ON	ON	CN
6,0	ON	NO	NO	NO	ON	ON	ON	ON	ON	ON	0 N	ON N
7,0	ON	ON	ON	ON	ON	NO	NO	<b>NRO102</b>	NR0101	ON	ON	0 N
8,0	0 Z	NRO104	NRO104	NO	NO	NO	NRO103	NRO101	<b>NRO100</b>	NRO103	ON	ON
9,0	ON	NRO106	NRO106	NO	NO	NO	NRO104	NRO102	NRO101	NRO104	ON	ON
10,0	ON	ON	NO	NO	NO	0N	NRO106	NRO103	NRO103	<b>NRO105</b>	ON	ON
11,0	ON	NO	ON	NO	NO	NO	NO	NRO105	NRO105	ON	ON	ON
12,0	NON	NO	NO	NO	NO	NO	NON	NO	NO	ON	ON	ON
13,0	NO	NO	ON	NO	NO	NO	NO	NO	NO	ON	ON	ON
14,0	ON	ON	NO	NO	NO	NO	ON	NO	NO	ON	ON	ON
15,0	ON	NO	ON	NO	NO	ON	ON	NO	NO	ON	ON	0 N
16,0	ON	NO	ON	NO	NO	NO	NON	NO	NO	ON	ON	ON
17,0	ON	ON	NO	NO	NO	NO	NO	ON	NO	ON	ON	ON
18,0	ON	NO	NO	NO	NO	NO	NO	NO	NO	ON	ON	ON
19,0	NO	NO	NO	ON	NO	NO	NO	NO	NO	ON	ON	ON
20,0	NON	NO	NO	NO	NO	NO	NO	ON	NO	ON	ON	ON
21,0	0N N	ON	NO	NO	NO	NO	NO	ON	NO	NO	ON	ON
22,0	NO	NO	NO	NO	NO	NO	NO	NO	NO	ON	ON	CN
23,0	ON	NO	NO	NO	ON	ON	ON	ON	NO	ON	ON	ON
24,0	NON	NO	NO	NO	NO	ON	NO	ON	NO	ON	ON	ON
25,0	ON	NO	NO	NO	ON	NO	ON	ON	NO	ON	NO	ON

Wind Direction [°]					M 77 DI			opumizano	u			
Wind speed @ MM @ highest HH [m/s]		33	09	6	120	150	180	210	240	270	300	330
3,0	NO	NO	NO	N	No	Q	No	N	No	ON	ON	QN
4,0	NO	ON	NO	NO	NO	NO	NO	ON	ON	0 N	ON	CN CN
5,0	NO	ON	ON	NO	NO	NO	ON	ON	ON	ON	0 Z	C Z
6,0	NO	ON	NO	NO	NO	NO	NO	ON	ON	ON	ON	ON
7,0	NO	NO	NO	NO	NO	ON	NO	NO	ON	ON	ON	CN
8,0	NO	NRO104	NRO104	NO	ON	ON	<b>VRO104</b>	NRO103	NRO103	NRO103	ON	CN
0'6	NO	NRO106	NRO106	NO	NO	NO	<b>NR0106</b>	NRO104	NRO104	NRO104	ON	CN
10,0	NO	NO	NO	NO	ON	0N	NO	NRO106	NRO106	NRO106	ON	CN
11,0	ON	NO	NO	NO	ON	NO	ON	ON	ON	ON	ON	ON
12,0	ON	NO	NO	NO	ON	NO	NO	NO	ON	ON	ON	ON
13,0	NO	NO	NO	NO	NO	ON	NO	NO	NO	ON	ON	ON
14,0	ON	NO	NO	ON	ON	NO	ON	NO	NO	ON	ON	ON
15,0	NO	NO	NO	ON	ON	NO	ON	NO	ON	ON	ON	ON
16,0	NO	NO	ON	NO	ON	NO	ON	NO	NO	ON	ON	ON
17,0	NO	NO	NO	NO	ON	0N N	ON	NO	ON	ON	ON	ON
18,0	NO	NO	NO	ON	ON	0N N	NO	NO	ON	NO	ON	ON
19,0	NO	NO	NO	NO	ON	0N N	NO	NO	NO	ON	ON	ON
20,0	NO	NO	NO	NO	ON	NO	NO	NO	ON	NO	ON	ON
21,0	NO	NO	NO	NO	ON	NO	NO	NO	ON	ON	ON	ON
22,0	NO	NO	NO	NO	ON	ON	NO	NO	ON	ON	ON	CN
23,0	NO	NO	NO	NO	NO	0N	NO	NO	ON	ON	ON	ON
24,0	0N N	NO	NO	ON	NO	ON	NO	NO	ON	NO	ON	ON
25,0	NON	ON	NO	NO	ON	NO	NO	NO	NO	ON	ON	NO

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0	0	0	0		L	)

			NRO mod	les for turt	oine 25 w	ith Farm	n noise	optimizati	uc			
Wind Direction [7] Wind speed @ MM @ highest	9	30	99	6	120	150	180	210	240	270	300	330
3,0	Q	N	NO	Q	ON	QN	Q	ON	QN	QN	Q	Q
4,0	0 N	ON	ON	NO	ON	0N N	NO	ON	ON	ON N	0 N	ON ON
5,0	0 0 Z 2	ON C	ON	ON S	0 N	ON	NO	ON	ON	ON	NO	ON
0'0			o a	o d	ON S	ON S	ON S	NO	NO	ON	NO	NO
0°2			NRO106	NPO106	ND0105			ON	ON	ON	ON N	ON
0'6	0 Z	ON N	NON	ON	ON				NPO106	NPO104	NRO104	NRO106
10,0	ON	ON	ON	NO	ON	0N N	ON N	0 N	ON	ONO	ON	
11,0	ON	ON	ON	NO	NO	0N N	0N N	ON	0 N	ON N	O N	
12,0	ON	ON	ON	ON	NO	NO	NO	NO	NON	ON	0 N	ON ON
13,0	ON S	ON	ON	ON	ON	NO	NO	ON	ON	NO	ON	ON
14,0	o z	o d	ON S	0N	0 N	0 N	NO	ON	ON	ON	ON	NO
15,0			o d	o c	o z	o z	ON I	ON	ON	ON	ON	NO
17.0								ON C	ON S	ON S	0 Z	ON
18,0	ON	ON	ON N	ON N							O Z	OZ Z
19,0	NO	0N N	ON	0 N	0 N	0 N					D Z	
20,0	NO	NO	NO	ON	0N N	0 N	0 N	C N				
21,0	ON	ON	ON	NO	NO	0N N	0N N	ON	ON	C N		
22,0	ON	NO	ON	NO	NO	NO	0N N	ON	0 N	ON N	C N	
23,0	ON	ON	NO	ON	NO	NO	ON	ON	0N N	0 N	ON	C N
24,0	NO	ON	NO	ON	NO	NO	NO	ON	N	ON	ON	ON
25,0	ON	ON	NO	NO	NO	NO	NO	ON	ON	NO	NO	ON
			NRO mod	les for turt	oine 26 w	ith Farm	n noise	optimizati	ц			
Wind Direction ["]												The state of the s
MM @ highest HH [m/s]	6	8	60	06	120	150	180	210	240	270	300	330
3,0	ON	ON	NO	N	NO	Ŋ	No	N	NON	ON	ON	CN
4,0	NO	ON	ON	NO	NO	ON	NO	ON	ON	ON	ON	CN
5,0	0N	ON	NO	NO	NO	ON	NO	ON	NO	0N N	0 N	ON N
6,0	o c	ON S	ON S	NO	ON	ON	NO	ON	ON	ON	ON	NO
0'7	2 C	OZ OZ	NPOIDE	o z	o z	o d	ON A	ON	NON	ON N	OZ	ON
9,0	0 N	ON N	ON	0 N	ON ON			AULUNN NO	SULUAN NO	NRO106	NRO104	NRO106
10,0	0 N	NO	NO	NO	0N N	0 N	0 Z	ON N	0 N	02 OX	ON	ON ON
11,0	ON	ON	ON	ON	ON	ON	NO	ON	NO	N	NO	ON
12,0	0 2	o n	ON S	0 N	ON	ON	NO	ON	NO	ON	NO	NO
14.0				o z	o z	ON S	on s	ON	NO	N	NO	NO
15,0	NON		) ON					D C	O Q	o d	ON S	ON S
16,0	NO	0 N	ON	ON N	ON N						D C	ON R
17,0	NO	0 N	ON	0N N	ON N	o z	o N	0 Z	0 Z	ON ON	D OZ	D C
18,0	0 N	ON	ON	ON	NO	ON	NO	ON	ON	ON	ON	ON
19,0	ON S	0 Z	NON	NO	ON	ON	NO	ON	ON	ON	NO	NON
20,0	o d	o c	ON S	ON S	0 N	NO	NO	ON	NO	ON	NO	NO
0,12			S S	ON C	o z	ON S	o z	ON	0 N	NO	NO	NO
23.0				S S	S C			0 Z	O Z	ON S	ON S	ON
24,0	ON	ON	ON ON	02 OX	0 Z						o q	ON A
25,0	0 Z	ON	NO	N	ON	ON	NON N	) O	N OZ	N N	N ON	N N

Wind Speed 0         30         60         90         120         150         1	tion [°]							in the second se				
3.0         NO	ed @ 0 ghest s]	8	8	6	120	150	180	210	240	270	300	330
4,0         NO		NO NO	NON	NO	NO	No	QN	NO	NO	NO	ON	ON
5.0         NO		NO NO	ON	NO	ON	NO	NO	NO	ON	ON	ON	ON
5.0         NO		NO NO	NON	ON	ON	NO	NO	NO	ON	ON	ON	ON
7,0         NO		NO NO	ON	ON	ON	NO	NO	NO	0N N	ON	ON	ON
8.0         NNO         NRO105         NNO         NNO<		NO NC	NON	ON	ON	NO	NO	NO	ON	ON	0 Z	0 Z
9.0         NO		NO NRO	06 NRO106	ON	ON	NO	NRO104	NRO103	NRO104	NRO104	NR0106	NRO106
		NO NO	OZ	ON	ON	NO	NRO106	NRO104	<b>NRO106</b>	NRO106	ON	ON
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		NO NC	NON	ON	ON	NO	NON	NRO106	NO	ON	ON	0 N
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		NO	ON	ON	ON	NO	NO	NO	ON	ON	ON	ON
13.0         NO         N		NO	NON	ON	NO	NO	NO	NO	ON	NO	ON	ON
14,0         NO         N		NO NC	NO	ON	NO	NO	NO	NO	ON	NO	ON	ON
15,0         NO         N		NO	ON	ON	ON	NO	NON	NO	ON	ON	ON	ON
16.0         NO         N		NO	NON	ON	NO	NO	NO	NO	ON	ON	ON	ON
17.0         NO         N		NO	NON	ON	NO	NO	NO	NO	ON	ON	ON	ON
18,0         NO         N		NO NC	NON	ON	ON	NO	NO	NO	ON	ON	ON	ON
19,0         NO         N		NO NC	NON	ON	ON	NO	NO	NO	NO	ON	ON	ON
20,0         NO         N		NO	NON	ON	ON	NO	NO	NO	ON	ON	ON	ON
21,0         NO         N		NO NC	NON	ON	0N	NO	NO	NO	ON	ON	ON	ON
22,0         NO         N		NO NC	NON	ON	NO	NO	NO	NO	ON	NO	ON	ON
23,0         NO         N		NO NC	NON	NO	NO	NO	NO	NO	NO	ON	ON	ON
24,0 NO NO NO NO NO NO NO NO NO 25,0 NO		NO NC	NO	NO	ON	NO	NO	NO	NO	NO	ON	ON
25,0 NO NO NO NO NO NO NO NO		NO NO	ON	NO	ON	NO	NO	ON	NO	NO	ON	ON
		NO	NON	NO	ON	NO	ON	ON	ON	ON	ON	NO

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			NRO mode	s for turt	oine 24 w	vith Farr	n noise	optimizatio	c			
Wind Direction [°] Wind speed @ MM @ highest HH [m/s]	•	R	8	8	120	150	180	210	240	270	300	330
3,0	NO	NO	NO	NO	NO	No	No	N	N	NO	No	ON
4,0	NO	ON	NO	ON	ON	NO	NO	NO	ON	ON	ON	ON
5,0	ON	ON	NO	ON	ON	NO	NO	NO	ON	ON	ON	ON
6,0	ON	ON	NO	ON	ON	NO	No	NO	ON	ON	ON	ON
2,0	NO	NO	ON	ON	ON	ON	NO	NO	NO	NO	ON	ON
8,0	NO	NRO104	NRO106	ON	NO	0 N	NO	NRO106	<b>NRO106</b>	NRO106	ON	ON
9,0	ON	<b>NRO105</b>	NRO106	ON	ON	NO	NO	NO	NO	NO	ON	0 N
10,0	ON	ON	ON	ON	ON	NO	NO	NO	NO	NO	ON	0N N
11,0	NO	NO	ON	ON	ON	ON	NO	NO	NO	NO	ON	ON
12,0	NO	NO	ON	ON	NO	NO	NO	NO	NO	NO	ON	NON
13,0	NO	NO	ON	ON	ON	ON	NO	NO	NO	NO	ON	0N N
14,0	ON	ON	ON	ON	ON	NO	NO	ON	ON	ON	ON	0N N
15.0	NO	NO	NO	ON	ON	ON	NO	NO	NO	ON	NO	ON
	NON	NO	ON	ON	ON	NO	NO	ON	ON	ON	NO	NO
0'11 Na	ON ON	ON	NO	NO	ON	ON	NO	NO	NO	ON	NO	ON
18,0	NOS	NO	NO	ON	ON	ON	N	NO	ON	ON	ON	ON
0 61 I Fe	ON	ON. 10	ON	NO	ON	NO	0N N	NO	ON	NO	ON	NO
0.02	NO	ONO	ON	ON	ON	ON	NO	NO	NO	NO	NO	NO
ul 21.0	6N V	igge	NO	NO	ON	ON	NO	NO	ON	ON	ON	NO
8 22,0 A	NON	NO	ON	ON	NO	NO	NO	NO	NO	NO	ON	NO
0 Equa	QN	ON	ON	ON	ON	NO	NO	NO	NO	NO	NO	ON
24.0	ON NO	0N N	ON	ON	NO	ON	NO	NO	NO	NO	ON	NO
25,0°%ron	ON	ON	ON	ON	ON	NO	NO	NO	ON	NO	NO	NO
100 m	Generació											

CIF B-BIO	1	1	NRO mod	tes for turb	ine 27 w	ith Farr	n noise	optimizatic	u			
/ind Direction [°]			1 : I - I - I - I - I - I - I - I - I - I									
Wind speed @ MM @ highest HH [m/s]	•	8	60	66	120	150	180	210	240	270	300	330
310001 power	NO	NO.	NO	NO	QN	No	No	NON	NO	ON	ON	QN
18/ Fender 0	NO9110	ON	ON	NO	ON	NO	NO	ON	ON	ON	ON	ON
5.0 Ingenieria	ON	ON	ON	ON	0N N	NO	ON	ON	NO	NO	ON	ON
6,0	ON	ON	NO	ON	NO	NO	ON	ON	ON	NO	ON	NO
7,0	ON	ON	NO	ON	NO	NO	ON	NON	NO	NO	ON	NO
8,0	ON	ON	NRO105	NRO103	NR0106	NO	ON	<b>NRO106</b>	NRO104	NRO103	NRO103	NRO106
9,0	ON	ON	ON	NRO104	NO	NO	ON	NO	<b>NRO106</b>	NRO104	NRO104	ON
10,0	ON	ON	ON	NRO105	NO	NO	ON	ON	ON	NRO105	NRO106	ON
11,0	ON	NO	ON	NO	NO	NO	ON	NO	NO	NO	ON	ON
12,0	ON	ON	ON	NO	NO	NO	ON	NO	NO	NO	ON	NO
13,0	ON	ON	NO	NO	NO	0 Z	ON	NO	ON	NO	ON	ON
14,0	ON	ON	ON	NO	NO	NO	ON	ON	ON	NO	NO	ON
15,0	ON	ON	NO	NO	NO	NO	ON	ON	ON	NO	ON	NO
16,0	ON	ON	NO	NO	NO	NO	ON	NO	NO	ON	NO	OZ
17,0	ON	ON	ON	NO	NO	NO	ON	NO	NO	NO	ON	NO
18,0	ON	ON	ON	NO	NO	NO	ON	NO	NO	NO	NO	ON
19,0	ON	NO	ON	NO	NO	NO	ON	NO	ON	NO	NO	NO
20,0	ON	NON	NO	NO	NO	No	ON	NO	ON	NO	NO	NO
21,0	ON	NO	NO	NO	NO	ON	NO	NO	ON	NO	NO	ON
22,0	ON	NON	NO	NO	NO	NO	NO	NO	NO	NO	ON	ON
23,0	NO	ON	NO	NO	ON	NO	ON	ON	NO	NO	NO	NO
24,0	ON	NO	NO	NO	NO	NO	ON	NO	ON	NO	NO	ON
25,0	ON	NO	NO	NO	NO	NO	ON	NO	ON	ON	NO	ON
			NRO mot	des for turb	bine 28 w	ith Fan	m noise	optimizatic	uc			

THE R. LEWIS CO., NAME AND ADDRESS OF TAXABLE PARTY.												
nd speed @ // @ highest HH [m/s]	•	8	8	6	120	150	180	210	240	270	300	330
3,0	NO	NON	NO	ON	ON	ON	Q	ON	ON	ON	No	ON
4,0	ON	NO	NO	ON	NO	NO	NON	ON	ON	ON	ON	0 Z
5,0	ON	ON	NO	ON	NO	ON	NO	NO	NO	ON	ON	ON
6,0	ON	NO	ON	ON	NO	NO	NO	NO	ON	ON	ON	ON
7,0	ON	ON	ON	NO	NO	NO	NO	NO	NO	ON	NO	ON
8,0	ON	0N N	NRO104	NRO106	NO	ON	NO	NRO106	NRO104	NRO103	NRO104	NR0106
0'6	ON	0N N	NRO106	NO	NO	NO	NO	NO	<b>NRO106</b>	NRO104	NRO106	ON
10,0	ON	0N N	NO	NO	NO	ON	NO	NO	ON	<b>NRO105</b>	ON	0N N
11,0	ON	0N N	ON	NO	NO	ON	NO	NO	ON	ON	NO	ON
12,0	ON	ON	NO	NO	NO	ON	ON	ON	NO	ON	NO	ON
13,0	ON	ON	ON	NO	NO	ON	ON	NO	NO	NO	ON	0N N
14,0	NO	ON	ON	NO	ON	ON	ON	NO	NO	NO	NO	ON
15,0	NO	ON	NO	NO	0N	ON	NO	NO	NO	NO	NO	ON
16,0	ON	ON	NO	NO	NO	ON	NO	NO	NO	ON	NO	ON
17,0	ON	ON	NO	NO	NO	NO	NO	ON	NO	NO	NO	ON
18,0	NO	ON	NO	NO	NO	NO	ON	ON	NO	ON	ON	ON
19,0	NO	ON	NO	NO	NO	NO	ON	ON	NO	NO	NO	ON
20,0	ON	ON	NO	NO	NO	ON	ON	ON	NON	ON	ON	ON
21,0	NO	ON	NO	NO	NO	NO	NO	NO	NON	NO	NO	ON
22,0	NO	NO	NO	NO	NO	ON	NO	NO	NO	NO	NO	ON
23,0	NO	ON	NO	NO	NO	NON	NO	NO	NO	ON	NO	ON
24,0	NO	ON	NO	NO	NO	NON	NO	NO	NO	NO	NO	ON
25,0	NO	ON	NO	NO	NO	NO	0N N	ON	NO	ON	NO	ON

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