

EXHIBIT 11
Acoustic Assessment Report

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Technical Memorandum

TO: Scott Koziar, Senior Project Manager

FROM: Scott Zeimetz, Senior GIS Specialist

DATE: December 2, 2011

SUBJECT: Acoustical Analysis - New Frontier Wind Energy Project

1.0 Introduction

An acoustical modeling analysis was completed for the proposed turbine layout of the New Frontier Wind Energy Project (Project) in McHenry County, ND. The intent of the analysis was to estimate operating sound levels for the Project. Six turbines were modeled in order to assess potential increases in sound levels resulting from the operation of wind turbines at residences in and around the Project.

2.0 Methodology

Modeling was performed using the DECIBEL module from WindPRO version 2.7.473, a comprehensive 2-dimensional acoustic modeling software developed specifically for the wind industry. The software has a high level of reliability and follows methods specified by the Organization for International Standards (ISO) 9613-2 "Attenuation of Sound during Propagation Outdoors" standards. The ISO standard states:

"This part of ISO 9613 specifies an engineering method for calculating the attenuation of sound during propagation outdoors in order to predict the levels of environmental noise at a distance from a variety of sources. The method predicts the equivalent continuous A-weighted sound pressure level ... under meteorological conditions favorable to propagation from sources of known sound emissions. These conditions are for downwind propagation ... or, equivalently, propagation under a well-developed moderate ground-based temperature inversion, such as commonly occurs at night."

Sound levels for the six potential turbines that could be used at the site were modeled. The six different turbine types include the Siemens 2.3 MW 101, Siemens 2.3 MW 113, Gamesa 2 MW G90, Gamesa 2 MW G97, GE 1.6 MW, and Vestas 2 MW V90 machines. The turbine source sound power levels came entirely from the WindPRO turbine catalogue and no additional octave data was entered into the software. Assumptions included in the model were a wind speed of 8.0 meters/second (expected peak sound level outputs for turbines included in this analysis) and a ground attenuation value of 0.5 (intermediate value between highly absorptive and highly reflective surfaces). Terrain was not incorporated into the analysis and the model assumes a flat or gently sloping landscape (the most conservative approach). Additionally, the model assumed a turbine would be located at each of 66 turbine locations – an extremely conservative assumption since this includes a number of alternative locations that would likely not have a turbine (e.g., if a Siemens 2.3 101 turbine is used, only 44 turbine locations out of the 66 possible turbine locations would actually be used).

Based on the modeling results, sound levels were calculated at occupiable residences within 2,000 meters (approximately 1.2 miles) of a proposed wind turbine. The sensors (in this case the residences) were assumed to be a 1.5 m (4.9 feet) above the surface of the ground.

3.0 Modeling Results

The table below summarizes A-weighted decibel (dBA) levels at residences within 2,000 feet of the nearest turbine. A-weighted decibels are an expression of the relative loudness of sounds in air as perceived by the human ear. In the A-weighted system, the decibel values of sounds at low frequencies are reduced, compared with unweighted decibels, in which no correction is made for audio frequency. This correction is made because the human ear is less sensitive at low audio frequencies, especially below 1000 Hz, than at high audio frequencies.

Residence	Status	Distance to Turbine (ft)	Closest Turbine	Sound Levels in A-weighted Decibels (mean values - Normal)				
				Vestas V90	Siemens 2.3 101	Siemens 2.3 113	GE 1.6	Gamesa G90/G97
J	Participant	1403	15	42.7	45.7	43.4	42.6	44.3
K	Participant	1411	49	43.2	46.1	43.8	43.0	44.8
H	Participant	1414	8	43.1	46.1	43.8	43.0	44.7
M	Participant	1436	24	45.5	48.5	46.3	45.4	47.1
O	Participant	1478	33	44.3	47.3	45.0	44.2	45.9
P	Participant	1715	32	41.8	44.8	42.5	41.7	43.4
I	Participant	1894	8	41.9	44.9	42.6	41.8	43.5
G	Participant	1953	6	40.3	43.2	40.9	40.1	41.9
L	Participant	2257	50	42.2	45.1	42.8	42.0	43.8
Q	Non-Participant	2540	1	35.5	38.3	36.1	35.4	37.1
T	Non-Participant	2596	34	39.3	42.1	39.9	39.2	40.9
AF	Non-Participant	2684	34	37.5	40.3	38.1	37.4	39.2
E	Non-Participant	2745	19	38.6	41.4	39.2	38.5	40.2
F	Participant	2792	46	37.9	40.7	38.5	37.8	39.5
B	Non-Participant	2928	1	34.7	37.5	35.2	34.6	36.3
A	Non-Participant	2937	1	34.6	37.3	35.1	34.5	36.2
S	Non-Participant	2963	46	35.8	38.5	36.3	35.7	37.4
C	Non-Participant	3099	46	34.4	37.0	34.8	34.2	36.0
U	Non-Participant	3182	59	36.8	39.6	37.4	36.7	38.4
AB	Non-Participant	3582	34	36.3	39.0	36.8	36.2	37.9
W	Non-Participant	4078	30	35.7	38.4	36.2	35.6	37.4
AD	Non-Participant	4141	30	35.3	37.9	35.8	35.2	36.9
R	Non-Participant	4258	46	34.6	37.2	35.1	34.5	36.2
N	Non-Participant	4372	64	33.7	36.3	34.1	33.6	35.3
AE	Non-Participant	4559	30	35.2	37.8	35.7	35.1	36.8
V	Non-Participant	4764	53	33.2	35.7	33.6	33.1	34.8
X	Non-Participant	4918	30	34.4	36.9	34.8	34.3	36.0
D	Non-Participant	5044	21	35.3	37.8	35.7	35.1	36.9
AA	Non-Participant	5175	34	33.9	36.4	34.3	33.8	35.5
Z	Non-Participant	5425	34	33.9	36.3	34.3	33.7	35.5
Y	Non-Participant	5426	30	33.9	36.3	34.3	33.7	35.5
AC	Non-Participant	5869	34	32.7	35.1	33.1	32.6	34.4

Maps illustrating the modeling results are attached. Additionally, the raw WindPRO data sheets are also attached.

4.0 Discussion/Conclusion

The Project site in McHenry County is characterized as a rural agricultural land use area. Existing ambient sound levels are expected to be relatively low, although sound levels may occasionally be higher in localized areas due to roadway noise or in response to specific farming operations.

Based on the analysis completed, the range of expected operational sound levels at nearby residences will vary from less than 32.6 dBA to 48.5 dBA. Sound levels will be even lower at residences outside of the project area (non-participating residences) where the sound levels are estimated to be between 32.6 to 42.1 dBA. For reference, a quiet residential or agricultural area might be between 40 and 48 dBA and a normal conversation would be 60 dBA. These sound levels are relatively low and are not expected to result in annoyance of nearby landowners.

While there is no regulation governing environmental noise in North Dakota, the Environmental Protection Agency (EPA) has conducted several extensive studies to identify the effects of sound level on public health and welfare. In 1974, the EPA published a landmark document entitled "Information on Levels of Environmental Noise Requisite to Protect the Public Health and Welfare with an Adequate Margin of Safety" (EPA 1974). This publication remains the authoritative study based on a large sampling of community reaction to noise. The EPA sound level guidelines do not provide an absolute measure of noise impact, but rather a consensus on potential activity interference, human health and welfare effects, and annoyance. For outdoor residential areas, the recommended EPA guideline is a day-night level of 55 dBA.

Construction sound levels were not estimated as part of this analysis. Construction noise will vary during the construction period, depending on the phase of construction and the number and locations of operating construction equipment. Construction activities are not expected to be constant at any individual location through the entire construction period.

As part of standard facility operations, Meadowlark Wind I LLC would address complaints related to excessive noise levels (e.g., that might be caused by a malfunctioning turbine) on a case-by-case basis.

5.0 References

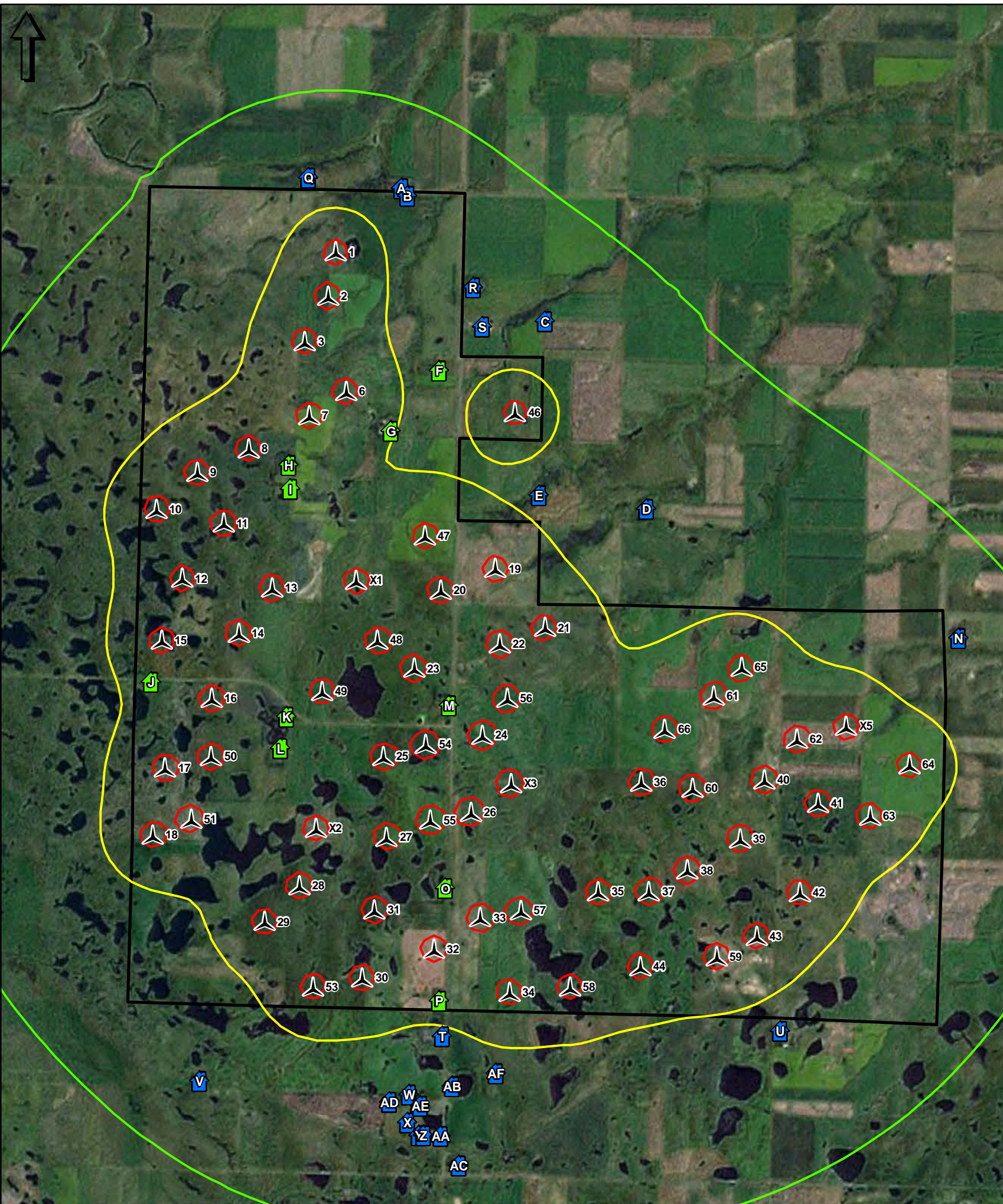
EPA (United States Environmental Protection Agency). 1974. Information on Levels of Environmental Noise Requisite to Protect the Public Health and Welfare with an Adequate Margin of Safety, Publication EPA-550/9-74-004, March.

EPA. 1978. Protective Noise Levels. Condensed Version of EPA Levels Document. Publication EPA-550/9-79-100, November.

ISO (Organization for International Standardization). 1989. Standard ISO 9613-2 Acoustics Attenuation of Sound During Propagation Outdoors. Part 2 General Method of Calculation. Geneva, Switzerland.

Maps

Acoustical Analysis Results by Turbine Model

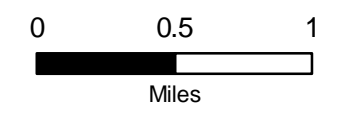


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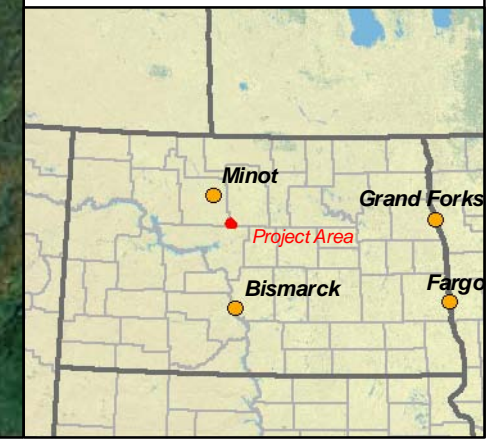
Acoustic Modeling Sound Contours Vestas V 90

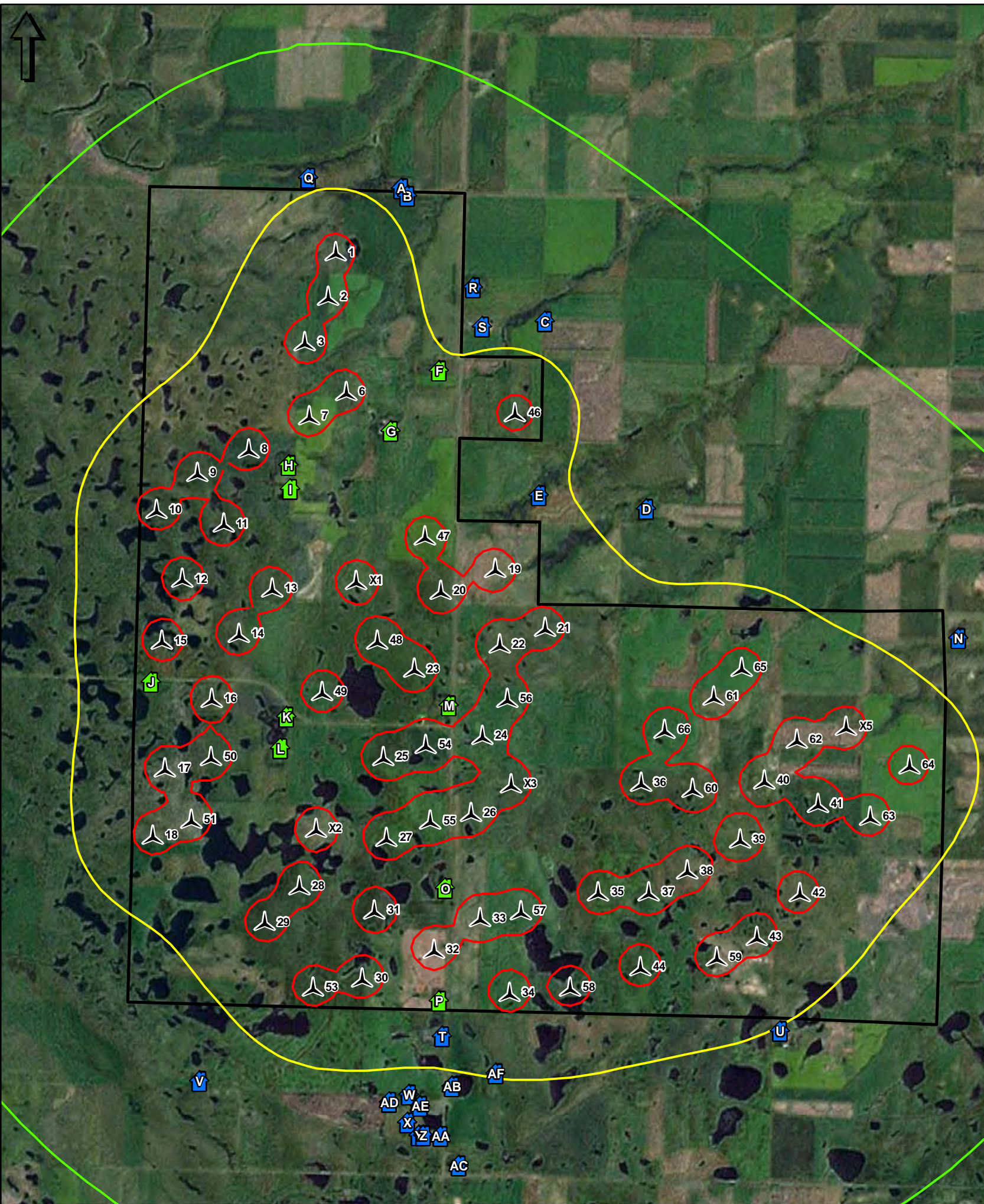
New Frontier Wind Energy Project
McHenry County, North Dakota

- Project Area
- Turbine Location
- Occupiable Structures**
- Participant
- Non-Participant
- Sound Contour dB(A)**
- 30
- 40
- 50



Source: ESRI (2011), NGS USA Topo (2011) / USGS 24K quad, WindPRO DECIBEL (2011).



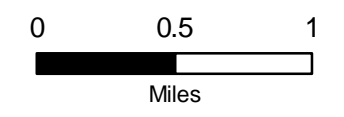


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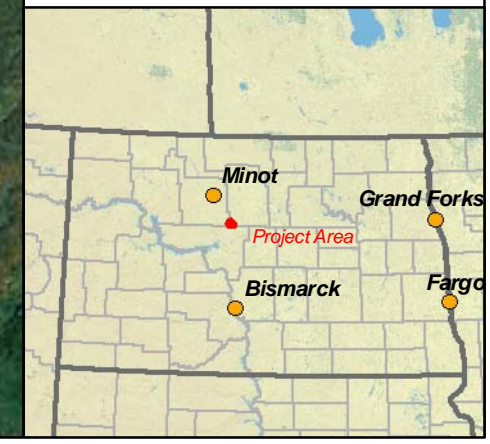
Acoustic Modeling Sound Contours Siemens 2.3 101

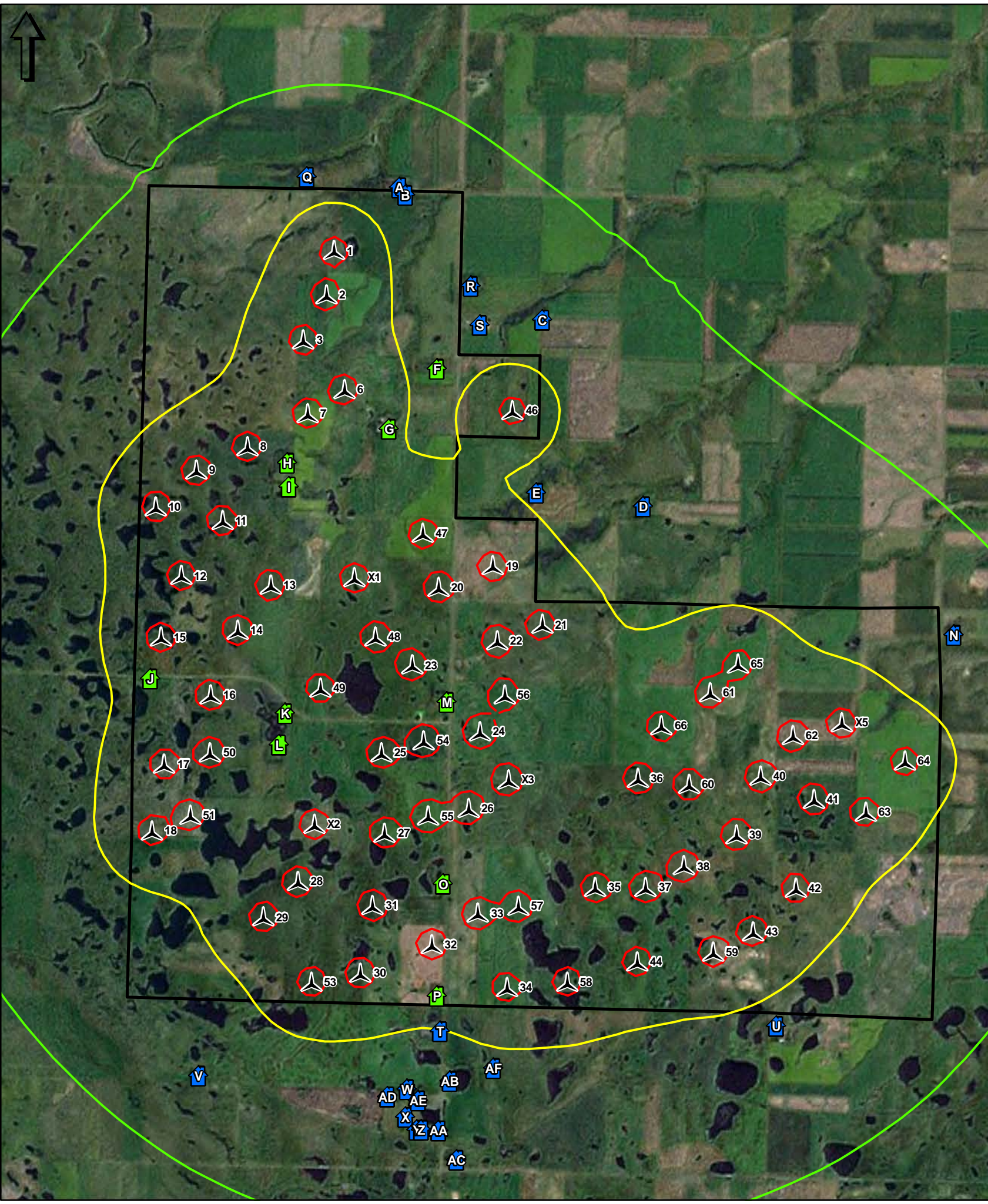
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Source: ESRI (2011), NGS USA Topo (2011) / USGS 24k quad, WindPRO DECIBEL (2011).



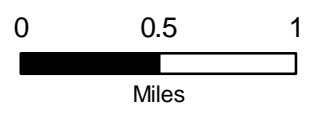


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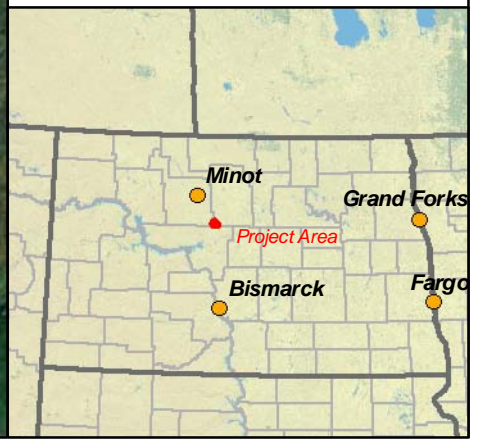
Acoustic Modeling Sound Contours Siemens 2.3 113

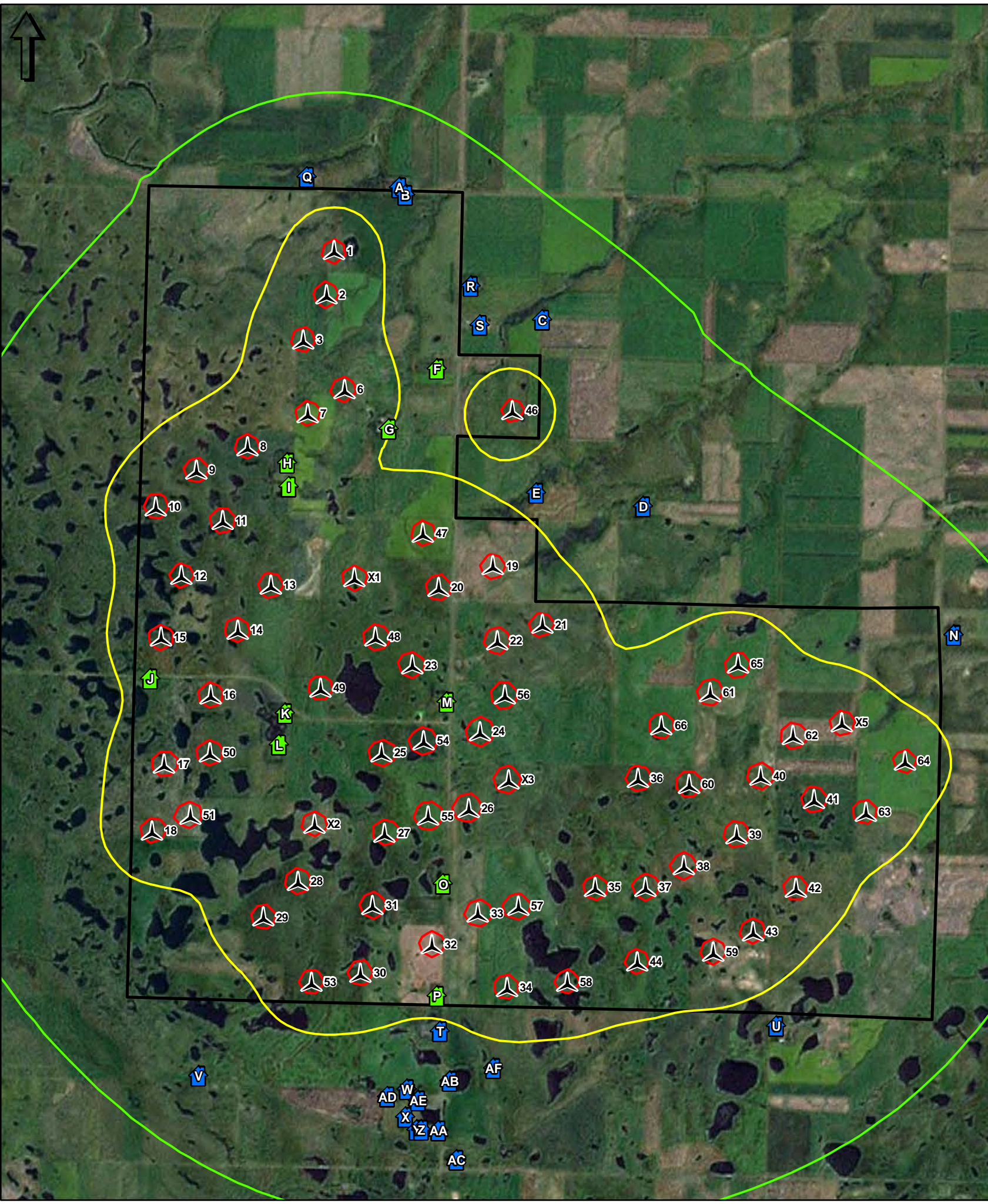
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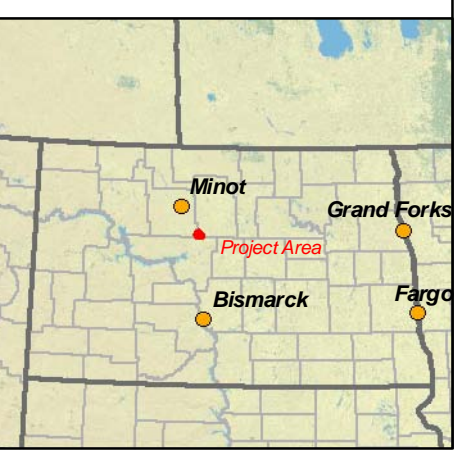
Acoustic Modeling Sound Contours GE 1.6

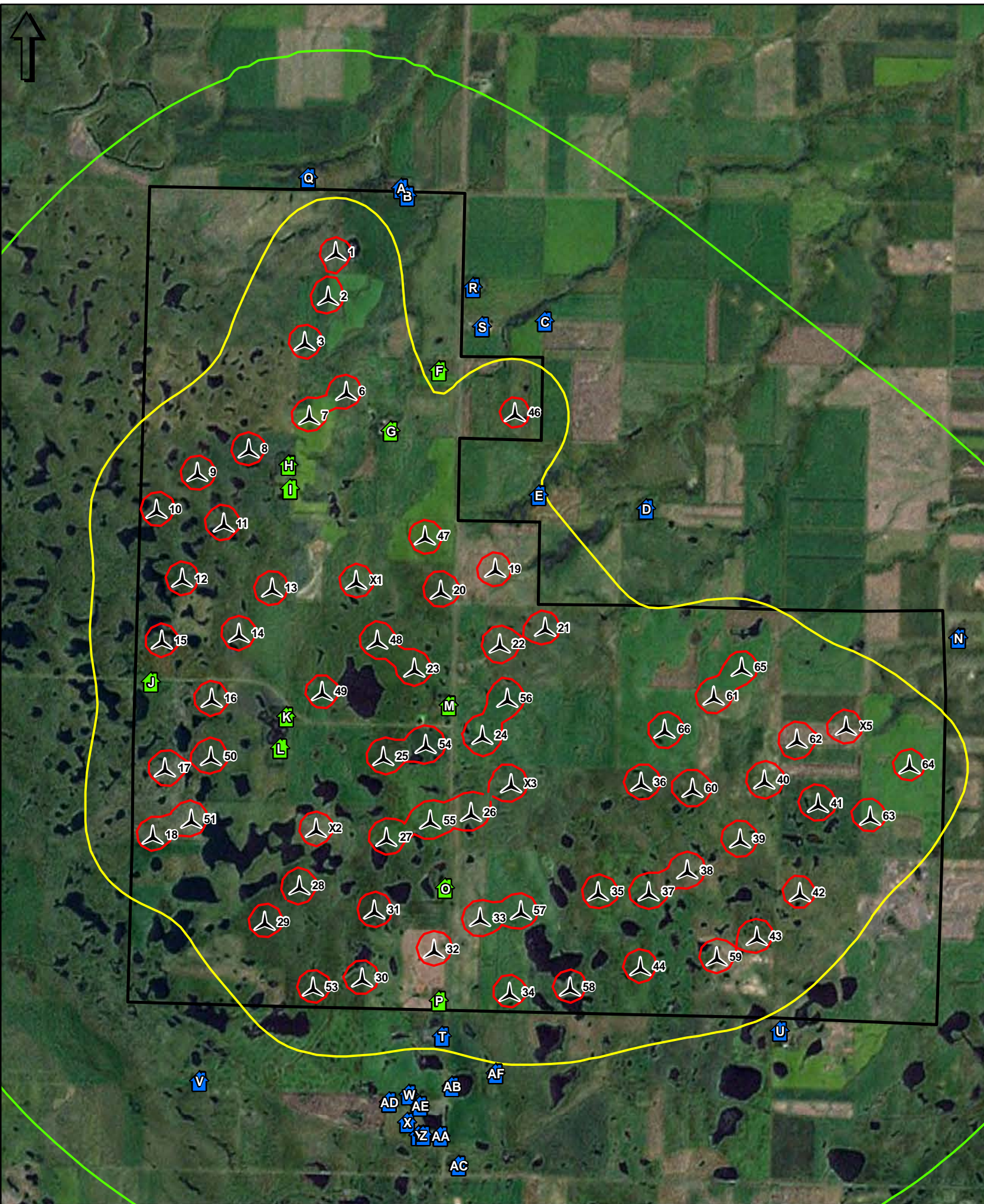
New Frontier Wind Energy Project
 McHenry County, North Dakota

- Project Area
- Turbine Location
- Occupiable Structures
 - Participant
 - Non-Participant
- Sound Contour dB(A)
 - 30
 - 40
 - 50

0 0.5 1
 Miles

Source: ESRI (2011), NGS USA Topo (2011) / USGS 24K quad, WindPRO DECIBEL (2011).





Residence	Status	Distance to Turbine (ft)	Closest Turbine	Vestas V90	Siemens 2.3 101	Siemens 2.3 113	GE 16	Gamesa G90/G97
J	Participant	1403	15	42.7	45.7	43.4	42.6	44.3
K	Participant	1411	49	43.2	46.1	43.8	43.0	44.8
H	Participant	1414	8	43.1	46.1	43.8	43.0	44.7
M	Participant	1436	24	45.5	48.5	46.3	45.4	47.1
O	Participant	1478	33	44.3	47.3	45.0	44.2	45.9
P	Participant	1715	32	41.8	44.8	42.5	41.7	43.4
I	Participant	1894	8	41.9	44.9	42.6	41.8	43.5
G	Participant	1953	6	40.3	43.2	40.9	40.1	41.9
L	Participant	2257	50	42.2	45.1	42.8	42.0	43.8
Q	Non-Participant	2540	1	35.5	38.3	36.1	35.4	37.1
T	Non-Participant	2596	34	39.3	42.1	39.9	39.2	40.9
AF	Non-Participant	2684	34	37.5	40.3	38.1	37.4	39.2
E	Non-Participant	2745	19	38.6	41.4	39.2	38.5	40.2
F	Participant	2792	46	37.9	40.7	38.5	37.8	39.5
B	Non-Participant	2928	1	34.7	37.5	35.2	34.6	36.3
A	Non-Participant	2937	1	34.6	37.3	35.1	34.5	36.2
S	Non-Participant	2963	46	35.8	38.5	36.3	35.7	37.4
C	Non-Participant	3099	46	34.4	37.0	34.8	34.2	36.0
U	Non-Participant	3182	59	36.8	39.6	37.4	36.7	38.4
AB	Non-Participant	3582	34	36.3	39.0	36.8	36.2	37.9
W	Non-Participant	4078	30	35.7	38.4	36.2	35.6	37.4
AD	Non-Participant	4141	30	35.3	37.9	35.8	35.2	36.9
R	Non-Participant	4258	46	34.6	37.2	35.1	34.5	36.2
N	Non-Participant	4372	64	33.7	36.3	34.1	33.6	35.3
AE	Non-Participant	4559	30	35.2	37.8	35.7	35.1	36.8
V	Non-Participant	4764	53	33.2	35.7	33.6	33.1	34.8
X	Non-Participant	4918	30	34.4	36.9	34.8	34.3	36.0
D	Non-Participant	5044	21	35.3	37.8	35.7	35.1	36.9
AA	Non-Participant	5175	34	33.9	36.4	34.3	33.8	35.5
Z	Non-Participant	5425	34	33.9	36.3	34.3	33.7	35.5
Y	Non-Participant	5426	30	33.9	36.3	34.3	33.7	35.5
AC	Non-Participant	5869	34	32.7	35.1	33.1	32.6	34.4

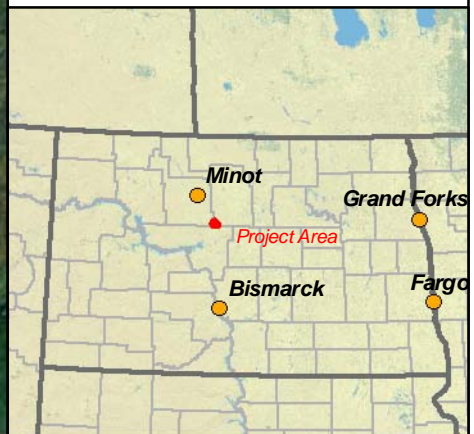
Acoustic Modeling Sound Contours Gamesa G90/97

New Frontier Wind Energy Project
 McHenry County, North Dakota

- Project Area
- Turbine Location
- Occupiable Structures**
 - Participant
 - Non-Participant
- Sound Contour dB(A)**
 - 30
 - 40
 - 50

0 0.5 1
 Miles

Source: ESRI (2011), NGS USA Topo (2011) / USGS 24k quad, WindPRO DECIBEL (2011).



WindPRO Data Sheets

Project:

New_Frontier_111117

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Licensed user:

Element Power

421 SW 6th Ave., Suite 1000

US-PORTLAND, OR 97204

6027705189

Scott Zeimetz / scott.zeimetz@elpower.com

Calculated:

12/1/2011 6:20 PM/2.7.473

DECIBEL - Main Result

Calculation: V 90 on 80m

Noise calculation model:

ISO 9613-2 General

Wind speed:

8.0 m/s

Ground attenuation:

General, Ground factor: 0.5

Meteorological coefficient, C0:

0.0 dB

Type of demand in calculation:

1: WTG noise is compared to demand (DK, DE, SE, NL etc.)

Noise values in calculation:

All noise values are mean values (Lwa) (Normal)

Pure tones:

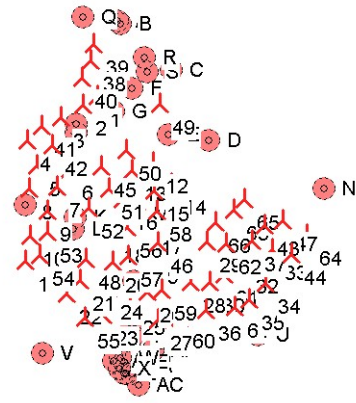
Pure and Impulse tone penalty are added to WTG source noise

Height above ground level, when no value in NSA object:

1.5 m Allow override of model height with height from NSA object

Deviation from "official" noise demands. Negative is more restrictive, positive is less restrictive.:

0.0 dB(A)



Scale 1:200,000

New WTG

Noise sensitive area

WTGs

UTM NAD83 Zone: 14				WTG type			Noise data									
East	North	Z	Row data/Description	Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Creator	Name	Wind speed [m/s]	Hub height [m]	LwA_ref [dB(A)]	Pure tones	Octave data
UTM NAD83 Zone: 14 [m]																
1	354,684.90	5,307,345.60	624.0 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
2	354,317.45	5,307,106.32	642.0 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
3	353,722.96	5,306,779.95	651.0 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
4	352,817.18	5,306,183.44	654.7 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
5	353,069.42	5,305,498.97	660.2 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
6	353,954.72	5,305,406.57	644.9 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
7	353,624.15	5,304,958.49	656.0 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
8	352,865.53	5,304,888.50	653.3 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
9	353,357.51	5,304,316.72	655.7 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
10	352,900.35	5,303,634.39	656.0 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
11	352,780.38	5,302,971.62	658.0 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
12	356,156.06	5,305,596.04	634.0 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
13	355,618.51	5,305,385.20	640.8 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
14	356,642.05	5,305,015.13	634.0 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
15	356,196.77	5,304,854.09	642.0 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
16	355,352.86	5,304,613.58	648.9 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
17	356,028.45	5,303,951.33	644.9 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
18	355,052.31	5,303,745.36	652.3 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
19	355,911.51	5,303,196.30	654.0 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
20	355,083.30	5,302,979.79	658.0 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
21	354,223.64	5,302,470.88	648.5 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
22	353,880.16	5,302,117.68	652.0 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
23	354,845.27	5,301,562.12	652.0 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
24	354,964.81	5,302,233.41	659.9 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
25	355,551.10	5,301,846.75	658.8 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
26	356,007.28	5,302,154.02	654.0 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
27	356,292.35	5,301,421.86	655.6 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
28	357,169.95	5,302,410.18	644.0 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
29	357,592.26	5,303,490.34	632.0 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
30	357,669.32	5,302,412.86	646.0 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
31	358,049.42	5,302,623.53	649.5 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
32	358,568.17	5,302,932.69	643.4 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
33	359,334.06	5,303,282.30	628.0 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
34	359,155.93	5,302,405.91	638.0 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
35	358,729.16	5,301,972.85	638.0 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
36	357,582.13	5,301,673.51	642.0 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
37	358,805.35	5,303,512.73	628.0 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
38	354,503.62	5,308,282.26	606.0 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
39	354,583.85	5,308,718.69	595.2 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
40	354,278.58	5,307,835.27	622.7 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
41	353,217.36	5,306,549.18	663.3 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
42	353,477.02	5,306,042.92	650.0 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
43	359,128.80	5,303,916.93	616.1 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
44	359,846.75	5,303,158.30	618.3 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
45	354,785.53	5,305,478.69	621.6 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
46	356,307.54	5,303,477.12	636.9 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
47	359,614.17	5,304,042.60	600.0 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
48	354,387.00	5,303,038.03	644.0 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
49	356,350.68	5,307,133.73	596.0 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
50	355,462.34	5,305,921.48	626.0 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
51	354,993.26	5,304,891.63	634.0 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
52	354,446.88	5,304,384.73	634.0 VESTAS V90 2000 90.0 IOI hub: ... Yes	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)

Project:

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Licensed user:

Element Power

421 SW 6th Ave., Suite 1000

US-PORLAND, OR 97204

6027705189

Scott Zeimetz / scott.zeimetz@elpower.com

Calculated:

12/1/2011 6:20 PM/2.7.473

DECIBEL - Main Result

Calculation: V 90 on 80m

...continued from previous page

UTM NAD83 Zone: 14				WTG type				Noise data				Wind speed				
East	North	Z	Row data/Description	Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Creator	Name	[m/s]	Hub height [m]	LwA,ref [dB(A)]	Pure tones	Octave data
UTM NAD83 Zone: 14 [m]																
55	354,356.64	5,301,473.64	644.5 VESTAS V90 2000 90.0 IOI hub: ...	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
56	355,470.76	5,303,863.43	652.0 VESTAS V90 2000 90.0 IOI hub: ...	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
57	355,516.48	5,303,115.24	656.0 VESTAS V90 2000 90.0 IOI hub: ...	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
58	356,270.80	5,304,317.44	640.0 VESTAS V90 2000 90.0 IOI hub: ...	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
59	356,404.56	5,302,223.42	647.1 VESTAS V90 2000 90.0 IOI hub: ...	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
60	356,890.59	5,301,473.85	640.0 VESTAS V90 2000 90.0 IOI hub: ...	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
61	358,333.55	5,301,769.19	637.6 VESTAS V90 2000 90.0 IOI hub: ...	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
62	358,100.22	5,303,431.13	634.0 VESTAS V90 2000 90.0 IOI hub: ...	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
63	358,303.12	5,303,341.26	609.6 VESTAS V90 2000 90.0 IOI hub: ...	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
64	360,239.00	5,303,653.03	597.4 VESTAS V90 2000 90.0 IOI hub: ...	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
65	358,583.00	5,304,623.03	598.0 VESTAS V90 2000 90.0 IOI hub: ...	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)
66	357,825.38	5,304,014.60	619.7 VESTAS V90 2000 90.0 IOI hub: ...	Yes	VESTAS	V90-2,000	2,000	90.0	80.0	EMD	Level 0 - calculated - Mode 0 - 07-2009	8.0	80.0	104.0	0 dB	Generic *)

*)Notice: One or more noise data for this WTG is generic or input by user

Calculation Results

Sound Level

Noise sensitive area			UTM NAD83 Zone: 14			Demands			Sound Level		Demands fulfilled ?	
No.	Name		East	North	Z	Imission height	Noise	Distance	From WTGs	Noise	Distance	All
						[m]	[dB(A)]	[m]	[dB(A)]			
A	Noise sensitive point: (68)		355,226.56	5,309,341.84	581.9	1.5	45.0	403	34.6	Yes	Yes	Yes
B	Noise sensitive point: User defined (69)		355,287.94	5,309,266.99	582.0	1.5	45.0	403	34.7	Yes	Yes	Yes
C	Noise sensitive point: User defined (70)		356,648.32	5,308,030.30	585.5	1.5	45.0	403	34.4	Yes	Yes	Yes
D	Noise sensitive point: User defined (71)		357,647.07	5,306,178.79	589.5	1.5	45.0	403	35.3	Yes	Yes	Yes
E	Noise sensitive point: User defined (72)		356,582.26	5,306,316.20	589.0	1.5	45.0	403	38.6	Yes	Yes	Yes
F	Noise sensitive point: User defined (73)		355,604.62	5,307,543.20	594.0	1.5	45.0	403	37.9	Yes	Yes	Yes
G	Noise sensitive point: User defined (74)		355,125.24	5,306,945.26	605.4	1.5	45.0	403	40.3	Yes	Yes	Yes
H	Noise sensitive point: User defined (75)		354,119.43	5,306,611.07	642.1	1.5	45.0	403	43.1	Yes	Yes	Yes
I	Noise sensitive point: User defined (76)		354,133.28	5,306,374.14	643.1	1.5	45.0	403	41.9	Yes	Yes	Yes
J	Noise sensitive point: User defined (77)		352,764.76	5,304,473.13	650.7	1.5	45.0	403	42.7	Yes	Yes	Yes
K	Noise sensitive point: User defined (78)		354,097.00	5,304,133.60	636.9	1.5	45.0	403	43.2	Yes	Yes	Yes
L	Noise sensitive point: User defined (79)		354,038.59	5,303,820.97	637.3	1.5	45.0	403	42.2	Yes	Yes	Yes
M	Noise sensitive point: User defined (80)		355,699.34	5,304,240.17	649.3	1.5	45.0	403	45.5	No	Yes	No
N	Noise sensitive point: User defined (81)		360,718.72	5,304,906.48	571.1	1.5	45.0	403	33.7	Yes	Yes	Yes
O	Noise sensitive point: User defined (82)		355,661.11	5,302,442.59	652.5	1.5	45.0	403	44.3	Yes	Yes	Yes
P	Noise sensitive point: User defined (83)		355,605.19	5,301,326.78	654.0	1.5	45.0	403	41.8	Yes	Yes	Yes
Q	Noise sensitive point: User defined (84)		354,310.34	5,309,443.01	586.0	1.5	45.0	403	35.5	Yes	Yes	Yes
R	Noise sensitive point: User defined (85)		355,940.03	5,308,365.11	585.0	1.5	45.0	403	34.6	Yes	Yes	Yes
S	Noise sensitive point: User defined (86)		356,023.22	5,307,975.58	588.1	1.5	45.0	403	35.8	Yes	Yes	Yes
T	Noise sensitive point: User defined (87)		355,634.43	5,300,982.43	647.3	1.5	45.0	403	39.3	Yes	Yes	Yes
U	Noise sensitive point: User defined (88)		358,960.54	5,301,029.11	616.0	1.5	45.0	403	36.8	Yes	Yes	Yes
V	Noise sensitive point: User defined (89)		353,242.76	5,300,542.21	637.2	1.5	45.0	403	33.2	Yes	Yes	Yes
W	Noise sensitive point: User defined (90)		355,305.26	5,300,407.57	639.6	1.5	45.0	403	35.7	Yes	Yes	Yes
X	Noise sensitive point: User defined (91)		355,287.22	5,300,129.87	634.7	1.5	45.0	403	34.4	Yes	Yes	Yes
Y	Noise sensitive point: User defined (92)		355,400.97	5,300,004.36	632.0	1.5	45.0	403	33.9	Yes	Yes	Yes
Z	Noise sensitive point: User defined (93)		355,446.47	5,300,001.22	632.0	1.5	45.0	403	33.9	Yes	Yes	Yes
AA	Noise sensitive point: User defined (94)		355,618.26	5,299,995.73	632.6	1.5	45.0	403	33.9	Yes	Yes	Yes
AB	Noise sensitive point: User defined (95)		355,727.81	5,300,487.35	637.9	1.5	45.0	403	36.3	Yes	Yes	Yes
AC	Noise sensitive point: User defined (96)		355,797.03	5,299,702.92	629.5	1.5	45.0	403	32.7	Yes	Yes	Yes
AD	Noise sensitive point: User defined (97)		355,109.73	5,300,327.99	640.6	1.5	45.0	403	35.3	Yes	Yes	Yes
AE	Noise sensitive point: User defined (98)		355,413.02	5,300,293.92	635.7	1.5	45.0	403	35.2	Yes	Yes	Yes
AF	Noise sensitive point: User defined (99)		356,159.63	5,300,614.61	639.4	1.5	45.0	403	37.5	Yes	Yes	Yes

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Calculated:
12/1/2011 6:20 PM/2.7.473

DECIBEL - Main Result

Calculation: V 90 on 80m

Distances (m)

WTG	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	2068	2014	2079	3184	2159	941	595	927	1117	3455	3265	3583	3267	6508	4999	6089	2131	1617	1479	6434	7628	6955
2	2413	2369	2507	3456	2399	1359	824	533	755	3057	2981	3297	3182	6769	4853	5921	2337	2054	1914	6264	7648	6652
3	2971	2938	3181	3970	2897	2031	1412	431	577	2498	2673	2976	3218	7242	4751	5769	2727	2725	2592	6105	7778	6256
4	3972	3951	4253	4830	3767	3101	2431	1371	1330	1711	2417	2660	3476	8004	4699	5600	3585	3809	3673	5915	8019	5657
5	4407	4373	4384	4628	3607	3257	2514	1529	1378	1070	1709	1938	2916	7672	4007	4882	4135	4056	3855	5194	7395	4960
6	4136	4084	3760	3772	2781	2700	1933	1216	984	1512	1281	1588	2099	6782	3420	4401	4052	3563	3298	4732	6650	4916
7	4667	4619	4311	4204	3255	3256	2490	1725	1504	987	951	1211	2196	7095	3237	4137	4537	4119	3855	4455	6627	4433
8	5041	5004	4917	4953	3982	3814	3056	2131	1953	427	1444	1586	2907	7853	3715	4494	4778	4641	4416	4788	7214	4363
9	5361	5313	4962	4676	3794	3932	3168	2418	2199	613	762	842	2343	7385	2970	3741	5214	4802	4527	4038	6496	3776
10	6163	6118	5777	5386	4555	4753	3989	3217	3004	850	1297	1153	2864	7921	3007	3555	5977	5623	5348	3809	6596	3111
11	6824	6776	6368	5828	5064	5374	4614	3878	3662	1502	1756	1518	3183	8171	2929	3269	6650	6251	5963	3479	6478	2473
12	3859	3772	2484	1601	837	2024	1698	2276	2167	3572	2526	2763	1431	4614	3192	4305	4267	2777	2383	4643	5359	5833
13	3976	3896	2838	2178	1340	2158	1636	1936	1784	2996	1970	2223	1148	5123	2943	4058	4263	2997	2622	4403	5490	5394
14	4552	4462	3015	1538	1302	2733	2455	2985	2853	3915	2693	2864	1220	4078	2753	3831	5004	3423	3024	4157	4611	5618
15	4591	4506	3208	1964	1512	2754	2350	2721	2563	3453	2220	2393	790	4522	2470	3577	4962	3520	3126	3912	4719	5227
16	4730	4654	3654	2777	2100	2940	2343	2348	2142	2592	1344	1535	509	5374	2193	3296	4941	3797	3428	3642	5086	4586
17	5450	5367	4126	2753	2429	3617	3127	3274	3076	3305	1940	1994	438	4787	1553	2658	5754	4415	4024	2995	4140	4403
18	5599	5527	4573	3557	2992	3838	3201	3014	2785	2401	1031	1017	815	5784	1438	2481	5746	4704	4340	2824	4759	3679
19	6184	6103	4890	3451	3191	4358	3831	3856	3642	3396	2042	1974	1065	5102	794	1894	6449	5169	4781	2231	3741	3764
20	6394	6321	5316	4123	3685	4623	3996	3786	3554	2774	1541	1360	1430	5965	769	1705	6539	5483	5113	2043	4327	3031
21	6944	6879	6066	5047	4512	5257	4565	4141	3904	2477	1667	1363	2305	6938	1439	1795	6973	6139	5792	2051	4952	2163
22	7349	7287	6529	5539	4993	5693	4986	4500	4264	2606	2028	1711	2795	7385	1810	1898	7338	6578	6238	2090	5196	1700
23	7789	7718	6715	5400	5061	6029	5390	5101	4864	3578	2678	2399	2811	6759	1200	796	7899	6891	6521	979	4150	1900
24	7113	7041	6036	4771	4392	5348	4715	4459	4223	3140	2089	1838	2137	6345	727	1110	7239	6209	5839	1419	4173	2414
25	7502	7425	6280	4812	4587	5697	5116	4975	4744	3829	2710	2487	2398	6006	606	523	7697	6530	6147	868	3506	2651
26	7230	7149	5911	4346	4202	5404	4872	4840	4617	3987	2751	2580	2109	5457	451	920	7484	6211	5822	1229	3160	3200
27	7991	7909	6618	4946	4903	6160	5645	5626	5402	4664	3489	3292	2880	5633	1200	694	8262	6952	6559	791	2697	3174
28	7199	7110	5644	3799	3950	5366	4975	5192	4993	4864	3523	3434	2348	4339	1509	1903	7592	6081	5682	2097	2261	4349
29	6312	6219	4637	2689	3001	4514	4245	4669	4503	4927	3554	3569	2036	3432	2197	2938	6797	5147	4752	3182	2816	5254
30	7347	7256	5709	3766	4052	5530	5198	5498	5310	5320	3965	3894	2687	3939	2008	2332	7791	6198	5801	2487	1893	4806
31	7287	7195	5585	3578	3973	5494	5218	5599	5422	5599	4231	4186	2852	3512	2395	2767	7777	6117	5723	2920	1836	5238
32	7228	7133	5447	3374	3923	5481	5287	5772	5614	6004	4630	4616	3153	2919	2948	3370	7779	6035	5649	3523	1944	5837
33	7320	7224	5455	3352	4096	5663	5580	6187	6050	6676	5306	5323	3759	2134	3768	4211	7949	6112	5744	4356	2284	6679
34	7972	7876	6158	4063	4681	6245	6071	6561	6401	6717	5346	5309	3913	2949	3495	3711	8544	6772	6390	3798	1391	6200
35	8159	8065	6405	4343	4845	6387	6141	6539	6363	6467	5111	5042	3784	3545	3104	3190	8679	6974	6584	3249	972	5670
36	8022	7932	6425	4506	4749	6194	5816	6031	5830	5572	4266	4143	3183	4504	2069	2007	8430	6890	6492	2067	1522	4484
37	6840	6744	5006	2907	3578	5147	5032	5618	5479	6116	4749	4777	3190	2367	3321	3875	7441	5635	5259	4057	2488	6306
38	1283	1259	2159	3782	2861	1326	1474	1715	1944	4187	4169	4485	4215	7073	5953	7042	1177	1439	1550	7387	8513	7842
39	895	892	2176	3979	3125	1557	1854	2158	2387	4619	4611	4928	4615	7223	6368	7462	774	1402	1620	7807	8848	8286
40	1780	1752	2378	3754	2759	1358	1228	1235	1468	3687	3706	4021	3866	7075	5567	6642	1608	1744	1750	6986	8261	7366
41	3440	3417	3737	4445	3373	2586	1949	904	932	2125	2571	2849	3390	7679	4779	5742	3093	3273	3148	6069	7966	6007
42	3734	3698	3743	4172	3117	2603	1879	858	735	1724	2007	2292	2862	7330	4211	5174	3501	3385	3197	5501	7430	5506
43	6683	6586	4803	2704	3499	5057	5020	5688	5567	6388	5036	5091	3445	1873	3768	4373	7332	5473	5111	4563	2893	6785
44	7719	7622	5828	3737	4542	6101	6053	6688	6556	7203	5832	5846	4286	1954	4246	4620	8376	6509	6150	4741	2306	7103
45	3888	3821	3159	2946	1982	2221	1505	1314	1108	2257	1511	1818	1539	5961	3160	4232	3993	3109	2787	4576	6102	5172
46	5964	5879	4566	3016	2852	4126	3664	3822	3622	3680	2306	2295	976	4637	1220	2262	6291	4902	4507	2584	3610	4243
47	6880	6783	4970	2904	3790	5323	5346	6065	5956	6863	5518	5580	3920	1402	4265	4842	7569	5673	5326	5020	3084	7270
48	6359	6294	5481	4527	3945	4667	3976	3583	3346	2166	1133	857	1780	6602	1406	2101	6405	5549	5202	2404	4995	2746
49	2478	2383	945	1610	850	851	1240	2292	2344	4465	3752	4040	2966	4903	4742	5855	3082	1298	903	6193	6639	7287
50	3428	3350	2419	2200	1187	1628	1078	1510	1404	3062	2250	2538	1698	5353	3485	4597	3705	2490	2129	4942	6014	5819
51	4456	4385	3548	2949	2134	2721	2058	1929	1714	2267	1174	1435	961	5725	2539	3617	4602	3600	3251	3962	5537	4689
52	5019	4955	4260	3669	2880	3365	2650	2251	2015	1684	430	695	1261	6294	2290	3269	5061	4252	3923	3603	5624	4026
53	5902	5851	5405	4934	4127	4415	3658	2967	2743	938	838	688	2396	7455	2648	3303	5778	5295	5002	3581	6229	3204
54	6552	6500	6020	5430	4681	5050	4297	3616	3392	1403	1378	1123	2776	7769	2596	3038	6422	5933	5633	3276	6171	2585
55	7916	7849	6946	5742	5330	6197	5525	5143	4906	3396	2673	2369	3075	7229	1625	1257	7970	7071	6712	1369	4625	1452
56	5484	5407	4330	3178	2693	3682	3101	3062	2845	2774	1400	1433	441	5351	1434	2540	5699	4526	4149	2886	4496	3999
57	6233	6156	5044	3732	3374																	

Project:
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Calculated:
12/1/2011 6:20 PM/2.7.473

DECIBEL - Main Result

Calculation: V 90 on 80m

...continued from previous page

WTG	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
58	5132	5046	3732	2315	2023	3294	2867	3145	2966	3509	2182	2287	577	4487	1971	3064	5488	4061	3667	3395	4248	4840
59	7215	7132	5812	4146	4097	5380	4892	4947	4732	4279	2996	2855	2136	5080	775	1201	7517	6159	5765	1461	2821	3581
60	8042	7956	6561	4765	4852	6204	5749	5837	5623	5101	3857	3694	3012	5142	1565	1294	8376	6957	6559	1349	2117	3765
61	8185	8093	6484	4463	4873	6386	6090	6419	6233	6191	4852	4760	3612	3941	2756	2764	8665	7017	6622	2811	970	5237
62	6572	6478	4823	2785	3260	4810	4604	5095	4939	5436	4064	4080	2534	3006	2632	3264	7107	5386	4997	3475	2551	5652
63	5871	5775	4043	1951	2619	4187	4108	4760	4639	5540	4211	4296	2606	2481	3253	4045	6478	4666	4290	4290	3377	6328
64	7575	7478	5654	3612	4518	6044	6076	6793	6681	7518	6160	6202	4576	1333	4738	5189	8280	6371	6031	5328	2928	7661
65	5791	5694	3918	1816	2621	4171	4165	4886	4782	5820	4513	4615	2909	2154	3646	4442	6441	4581	4218	4685	3614	6721
66	5927	5833	4185	2172	2616	4169	3985	4525	4382	5081	3730	3792	2138	3028	2675	3486	6467	4741	4352	3741	3194	5750

WTG	W	X	Y	Z	AA	AB	AC	AD	AE	AF
1	6966	7241	7376	7384	7409	6937	7723	7030	7089	6891
2	6771	7044	7184	7194	7229	6768	7550	6824	6900	6748
3	6566	6832	6980	6994	7044	6604	7375	6599	6703	6629
4	6289	6538	6698	6718	6792	6397	7133	6288	6436	6495
5	5561	5809	5969	5990	6065	5673	6406	5559	5708	5780
6	5178	5442	5592	5607	5661	5229	5994	5208	5317	5275
7	4851	5107	5263	5282	5348	4941	5687	4863	4996	5030
8	5102	5339	5503	5527	5614	5250	5957	5083	5254	5396
9	4368	4610	4772	4795	4877	4504	5219	4357	4518	4643
10	4024	4240	4408	4437	4542	4231	4883	3977	4180	4443
11	3599	3789	3959	3991	4112	3855	4448	3523	3755	4120
12	5258	5535	5642	5640	5626	5127	5904	5371	5354	4981
13	4987	5266	5385	5387	5389	4899	5685	5083	5095	4801
14	4798	5070	5162	5154	5123	4619	5379	4931	4879	4427
15	4535	4811	4915	4911	4893	4392	5167	4655	4627	4240
16	4206	4484	4609	4613	4625	4143	4931	4292	4320	4080
17	3617	3893	3997	3993	3977	3477	4255	3738	3709	3339
18	3347	3623	3757	3765	3792	3327	4110	3418	3470	3321
19	2854	3129	3233	3229	3214	2715	3495	2978	2945	2594
20	2552	2827	2963	2971	3002	2545	3324	2622	2676	2571
21	2330	2572	2734	2756	2842	2490	3184	2319	2481	2683
22	2226	2435	2604	2633	2743	2464	3083	2171	2382	2730
23	1243	1499	1654	1673	1747	1391	2089	1262	1389	1620
24	1857	2128	2271	2284	2331	1905	2664	1911	1991	2012
25	1460	1737	1848	1848	1852	1371	2158	1582	1559	1374
26	1882	2148	2234	2225	2193	1690	2460	2035	1953	1547
27	1415	1637	1674	1653	1577	1092	1789	1611	1430	818
28	2736	2957	2986	2962	2870	2404	3035	2929	2751	2060
29	3838	4075	4118	4096	4014	3535	4191	4020	3869	3213
30	3100	3299	3309	3280	3170	2734	3294	3301	3095	2348
31	3527	3721	3725	3695	3580	3155	3688	3730	3518	2758
32	4126	4315	4313	4282	4163	3748	4256	4330	4113	3343
33	4949	5130	5120	5087	4961	4563	5032	5155	4930	4147
34	4338	4489	4457	4421	4281	3928	4311	4549	4298	3491
35	3765	3904	3867	3829	3686	3349	3708	3976	3717	2906
36	2605	2766	2747	2712	2583	2201	2659	2815	2571	1773
37	4679	4881	4889	4859	4746	4316	4854	4879	4676	3924
38	7915	8190	8326	8335	8361	7890	8676	7977	8040	7844
39	8342	8618	8753	8760	8784	8310	9097	8407	8465	8256
40	7498	7771	7911	7921	7953	7489	8273	7553	7626	7462
41	6487	6745	6899	6917	6979	6561	7316	6503	6629	6624
42	5924	6184	6338	6355	6415	5994	6751	5944	6066	6055
43	5190	5394	5404	5375	5263	4830	5372	5388	5190	4441
44	5310	5474	5451	5416	5280	4909	5324	5518	5279	4479
45	5098	5372	5509	5517	5546	5080	5864	5161	5223	5054
46	3229	3499	3589	3581	3549	3045	3809	3369	3307	2866

To be continued on next page...

Project:

New_Frontier_111117

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Licensed user:

Element Power

421 SW 6th Ave., Suite 1000

US-PORTLAND, OR 97204

6027705189

Scott Zeimetz / scott.zeimetz@elpower.com

Calculated:

12/1/2011 6:20 PM/2.7.473

DECIBEL - Main Result**Calculation:** V 90 on 80m

...continued from previous page

WTG	W	X	Y	Z	AA	AB	AC	AD	AE	AF
47	5637	5834	5836	5805	5687	5267	5780	5839	5630	4867
48	2786	3044	3199	3216	3282	2882	3621	2805	2930	3003
49	6807	7084	7192	7190	7175	6676	7451	6918	6904	6522
50	5516	5794	5917	5920	5928	5441	6228	5605	5628	5352
51	4495	4771	4904	4912	4936	4465	5251	4565	4617	4433
52	4068	4336	4482	4495	4542	4102	4872	4110	4202	4140
53	3865	4099	4263	4288	4379	4030	4722	3841	4018	4203
54	3465	3676	3844	3874	3982	3684	4323	3412	3621	3914
55	1427	1635	1803	1832	1943	1689	2283	1371	1584	1997
56	3460	3738	3860	3862	3871	3386	4173	3554	3570	3321
57	2716	2994	3113	3115	3121	2636	3424	2817	2823	2582
58	4027	4302	4400	4394	4371	3868	4639	4155	4114	3705
59	2123	2373	2435	2420	2362	1863	2593	2295	2169	1627
60	1911	2092	2092	2063	1950	1525	2081	2118	1891	1128
61	3320	3459	3423	3385	3243	2904	3272	3531	3272	2461
62	4117	4337	4362	4337	4238	3781	4382	4310	4131	3420
63	4946	5180	5218	5196	5108	4635	5272	5129	4973	4299
64	5911	6083	6066	6031	5899	5517	5951	6118	5886	5093
65	5340	5572	5609	5586	5496	5026	5654	5524	5366	4684
66	4400	4640	4686	4665	4585	4104	4765	4579	4434	3786

Project:
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Licensed user:
Element Power
421 SW 6th Ave., Suite 1000
US-PORTLAND, OR 97204
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Scott Zeimetz / scott.zeimetz@elpower.com
Calculated:
12/1/2011 6:12 PM/2.7.473

DECIBEL - Main Result

Calculation: swt 101 on 80m

Noise calculation model:

ISO 9613-2 General

Wind speed:

8.0 m/s

Ground attenuation:

General, Ground factor: 0.5

Meteorological coefficient, C0:

0.0 dB

Type of demand in calculation:

1: WTG noise is compared to demand (DK, DE, SE, NL etc.)

Noise values in calculation:

All noise values are mean values (Lwa) (Normal)

Pure tones:

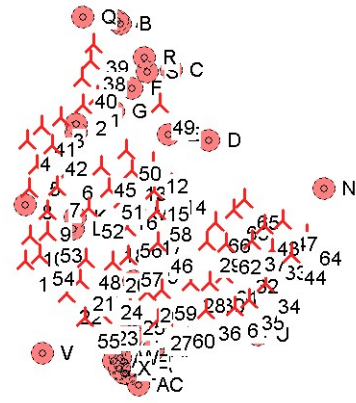
Pure and Impulse tone penalty are added to WTG source noise

Height above ground level, when no value in NSA object:

1.5 m Allow override of model height with height from NSA object

Deviation from "official" noise demands. Negative is more restrictive, positive is less restrictive.:

0.0 dB(A)



Scale 1:200,000

New WTG

Noise sensitive area

WTGs

UTM NAD83 Zone: 14	East	North	Z	Row data/Description	Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Noise data				Wind speed [m/s]	Hub height [m]	Lwa,ref [dB(A)]	Pure tones	Octave data
											Creator	Name	Level	Setting					
UTM NAD83 Zone: 14			[m]																
1	354,684.90	5,307,345.60	624.0	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
2	354,317.45	5,307,106.32	642.0	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
3	353,722.96	5,306,779.95	651.0	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
4	352,817.18	5,306,183.44	654.7	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
5	353,069.42	5,305,498.97	660.2	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
6	353,954.72	5,305,406.57	644.9	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
7	353,624.15	5,304,958.49	656.0	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
8	352,865.53	5,304,888.50	653.3	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
9	353,357.51	5,304,316.72	655.7	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
10	352,900.35	5,303,634.39	656.0	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
11	352,780.38	5,302,971.62	658.0	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
12	356,156.06	5,305,596.04	634.0	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
13	355,618.51	5,305,385.20	640.8	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
14	356,642.05	5,305,015.13	634.0	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
15	356,196.77	5,304,854.09	642.0	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
16	355,352.86	5,304,613.58	648.9	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
17	356,028.45	5,303,951.33	644.9	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
18	355,032.31	5,303,745.36	652.3	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
19	355,911.51	5,303,196.30	654.0	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
20	355,083.30	5,302,949.79	658.0	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
21	354,222.64	5,302,470.88	648.5	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
22	353,880.16	5,302,117.68	652.0	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
23	354,845.27	5,301,562.12	652.0	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
24	354,964.81	5,302,233.41	659.9	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
25	355,551.10	5,301,846.75	658.0	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
26	356,007.28	5,302,154.02	644.0	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
27	356,292.35	5,301,421.86	655.6	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
28	357,169.95	5,302,410.18	644.0	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
29	357,592.26	5,303,490.34	632.0	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
30	357,669.32	5,302,412.86	646.0	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
31	358,049.42	5,302,623.53	649.5	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
32	358,568.17	5,302,932.69	643.4	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
33	359,334.06	5,303,292.30	628.0	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
34	359,155.93	5,302,405.91	638.0	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
35	358,729.16	5,301,972.85	638.0	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
36	357,582.13	5,301,673.51	642.0	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
37	358,805.35	5,303,512.73	628.0	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
38	354,503.62	5,308,282.26	606.0	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
39	354,583.85	5,308,718.69	695.2	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
40	354,278.58	5,307,835.27	622.7	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
41	353,217.36	5,306,549.18	643.3	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
42	353,477.02	5,306,042.92	650.0	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0	dB	Yes	
43	359,128.80	5,303,916.93	616.1	Siemens SWT-2.3-101 2300 101.0 ... Yes	Yes	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0						

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421 SW 6th Ave., Suite 1000
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Calculated:
12/1/2011 6:12 PM/2.7.473

DECIBEL - Main Result

Calculation: swt 101 on 80m

...continued from previous page

UTM NAD83 Zone: 14			WTG type			Noise data			Wind	Hub	Lw,ref	Pure	Octave		
East	North	Z	Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Creator	Name	speed [m/s]	height [m]	[dB(A)]	tones	data
UTM NAD83 Zone: 14															
58	356,270.80	5,304,317.44	640.0	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0 dB	Yes
59	356,404.56	5,302,223.42	647.1	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0 dB	Yes
60	356,890.59	5,301,473.85	640.0	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0 dB	Yes
61	358,333.55	5,301,769.19	637.6	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0 dB	Yes
62	358,100.22	5,303,431.13	634.0	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0 dB	Yes
63	358,303.12	5,304,341.26	609.6	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0 dB	Yes
64	360,239.00	5,303,663.03	597.4	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0 dB	Yes
65	358,583.00	5,304,623.03	598.0	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0 dB	Yes
66	357,825.38	5,304,014.60	619.7	Siemens	SWT-2.3-101-2300	2,300	101.0	80.0	EMD	Level 0 - Guaranteed - Standard setting - 03-2009	8.0	80.0	107.0	0 dB	Yes

Calculation Results

Sound Level

Noise sensitive area		UTM NAD83 Zone: 14			Demands		Sound Level		Demands fulfilled ?		
No.	Name	East	North	Z	Imission height	Noise	Distance	From WTGs	Noise	Distance	All
					[m]	[dB(A)]	[m]	[dB(A)]			
A	Noise sensitive point: (68)	355,226.56	5,309,341.84	581.9	1.5	45.0	403	37.3	Yes	Yes	Yes
B	Noise sensitive point: User defined (69)	355,287.94	5,309,266.99	582.0	1.5	45.0	403	37.5	Yes	Yes	Yes
C	Noise sensitive point: User defined (70)	356,648.32	5,308,030.30	585.5	1.5	45.0	403	37.0	Yes	Yes	Yes
D	Noise sensitive point: User defined (71)	357,647.07	5,306,178.79	589.5	1.5	45.0	403	37.8	Yes	Yes	Yes
E	Noise sensitive point: User defined (72)	356,582.26	5,306,316.20	589.0	1.5	45.0	403	41.4	Yes	Yes	Yes
F	Noise sensitive point: User defined (73)	355,604.62	5,307,543.20	594.0	1.5	45.0	403	40.7	Yes	Yes	Yes
G	Noise sensitive point: User defined (74)	355,125.24	5,306,945.26	605.4	1.5	45.0	403	43.2	Yes	Yes	Yes
H	Noise sensitive point: User defined (75)	354,119.43	5,306,611.07	642.1	1.5	45.0	403	46.1	No	Yes	No
I	Noise sensitive point: User defined (76)	354,133.28	5,306,374.14	643.1	1.5	45.0	403	44.9	Yes	Yes	Yes
J	Noise sensitive point: User defined (77)	352,764.76	5,304,473.13	650.7	1.5	45.0	403	45.7	No	Yes	No
K	Noise sensitive point: User defined (78)	354,097.00	5,304,133.60	636.9	1.5	45.0	403	46.1	No	Yes	No
L	Noise sensitive point: User defined (79)	354,038.59	5,303,820.97	637.3	1.5	45.0	403	45.1	No	Yes	No
M	Noise sensitive point: User defined (80)	355,699.34	5,304,240.17	649.3	1.5	45.0	403	48.5	No	Yes	No
N	Noise sensitive point: User defined (81)	360,718.72	5,304,906.48	571.1	1.5	45.0	403	36.3	Yes	Yes	Yes
O	Noise sensitive point: User defined (82)	355,661.11	5,302,442.59	652.5	1.5	45.0	403	47.3	No	Yes	No
P	Noise sensitive point: User defined (83)	355,605.19	5,301,326.78	654.0	1.5	45.0	403	44.8	Yes	Yes	Yes
Q	Noise sensitive point: User defined (84)	354,310.34	5,309,443.01	586.0	1.5	45.0	403	38.3	Yes	Yes	Yes
R	Noise sensitive point: User defined (85)	355,940.03	5,308,365.11	585.0	1.5	45.0	403	37.2	Yes	Yes	Yes
S	Noise sensitive point: User defined (86)	356,023.22	5,307,975.58	588.1	1.5	45.0	403	38.5	Yes	Yes	Yes
T	Noise sensitive point: User defined (87)	355,634.43	5,300,982.43	647.3	1.5	45.0	403	42.1	Yes	Yes	Yes
U	Noise sensitive point: User defined (88)	358,960.54	5,301,029.11	616.0	1.5	45.0	403	39.6	Yes	Yes	Yes
V	Noise sensitive point: User defined (89)	353,242.76	5,300,542.21	637.2	1.5	45.0	403	35.7	Yes	Yes	Yes
W	Noise sensitive point: User defined (90)	355,305.26	5,300,407.57	639.6	1.5	45.0	403	38.4	Yes	Yes	Yes
X	Noise sensitive point: User defined (91)	355,287.22	5,300,129.87	634.7	1.5	45.0	403	36.9	Yes	Yes	Yes
Y	Noise sensitive point: User defined (92)	355,400.97	5,300,004.36	632.0	1.5	45.0	403	36.3	Yes	Yes	Yes
Z	Noise sensitive point: User defined (93)	355,446.47	5,300,001.22	632.0	1.5	45.0	403	36.3	Yes	Yes	Yes
AA	Noise sensitive point: User defined (94)	355,618.26	5,299,995.73	632.6	1.5	45.0	403	36.4	Yes	Yes	Yes
AB	Noise sensitive point: User defined (95)	355,727.81	5,300,487.35	637.9	1.5	45.0	403	39.0	Yes	Yes	Yes
AC	Noise sensitive point: User defined (96)	355,797.03	5,299,702.92	629.5	1.5	45.0	403	35.1	Yes	Yes	Yes
AD	Noise sensitive point: User defined (97)	355,109.73	5,300,327.99	640.6	1.5	45.0	403	37.9	Yes	Yes	Yes
AE	Noise sensitive point: User defined (98)	355,413.02	5,300,293.92	635.7	1.5	45.0	403	37.8	Yes	Yes	Yes
AF	Noise sensitive point: User defined (99)	356,159.63	5,300,614.61	639.4	1.5	45.0	403	40.3	Yes	Yes	Yes

Distances (m)

WTG	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	2068	2014	2079	3184	2159	941	595	927	1117	3455	3265	3583	3267	6508	4999	6089	2131	1617	1479	6434	7628	6955
2	2413	2369	2507	3456	2399	1359	824	533	755	3057	2981	3297	3182	6769	4853	5921	2337	2054	1914	6264	7648	6652
3	2971	2938	3181	3970	2897	2031	1412	431	577	2498	2673	2976	3218	7242	4751	5769	2727	2725	2592	6105	7778	6256
4	3972	3951	4253	4830	3767	3101	2431	1371	1330	1711	2417	2660	3476	8004	4699	5600	3585	3809	3673	5915	8019	5657
5	4407	4373	4384	4628	3607	3257	2514	1529	1378	1070	1709	1938	2916	7672	4007	4882	4135	4056	3855	5194	7395	4960
6	4136	4084	3760	3772	2781	2700	1933	1216	984	1512	1281	1588	2099	6782	3420	4401	4052	3563	3298	4732	6650	4916

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DECIBEL - Main Result

Calculation: swt 101 on 80m

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WTG	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
7	4667	4619	4311	4204	3255	3256	2490	1725	1504	987	951	1211	2196	7095	3237	4137	4537	4119	3855	4455	6627	4433
8	5041	5004	4917	4953	3982	3814	3056	2131	1953	427	1444	1586	2907	7853	3715	4494	4778	4641	4416	4788	7214	4363
9	5361	5313	4962	4676	3794	3932	3168	2418	2199	613	762	842	2343	7385	2970	3741	5214	4802	4527	4038	6496	3776
10	6163	6118	5777	5386	4555	4753	3989	3217	3004	850	1297	1153	2864	7921	3007	3555	5977	5623	5348	3809	6596	3111
11	6824	6776	6368	5828	5064	5374	4614	3878	3662	1502	1756	1518	3183	8171	2929	3269	6650	6251	5963	3479	6478	2473
12	3859	3772	2484	1601	837	2024	1698	2276	2167	3572	2526	2763	1431	4614	3192	4305	4267	2777	2383	4643	5359	5833
13	3976	3896	2838	2178	1340	2158	1636	1936	1784	2996	1970	2223	1148	5123	2943	4058	4263	2997	2622	4403	5490	5394
14	4552	4462	3015	1538	1302	2733	2455	2985	2853	3915	2693	2864	1220	4078	2753	3831	5004	3423	3024	4157	4611	5618
15	4591	4506	3208	1964	1512	2754	2350	2721	2563	3453	2220	2393	790	4522	2470	3577	4962	3520	3126	3912	4719	5227
16	4730	4654	3654	2777	2100	2940	2343	2348	2142	2592	1344	1535	509	5374	2193	3296	4941	3797	3428	3642	5086	4586
17	5450	5367	4126	2753	2429	3617	3127	3274	3076	3305	1940	1994	438	4787	1553	2658	5754	4415	4024	2995	4140	4403
18	5599	5527	4573	3557	2992	3838	3201	3014	2785	2401	1031	1017	815	5784	1438	2481	5746	4704	4340	2824	4759	3679
19	6184	6103	4890	3451	3191	4358	3831	3856	3642	3396	2042	1974	1065	5102	794	1894	6449	5169	4781	2231	3741	3764
20	6394	6321	5316	4123	3685	4623	3996	3786	3554	2774	1541	1360	1430	5965	769	1705	6539	5483	5113	2043	4327	3031
21	6944	6879	6066	5047	4512	5257	4565	4141	3904	2477	1667	1363	2305	6938	1439	1795	6973	6139	5792	2051	4952	2163
22	7349	7287	6529	5539	4993	5693	4986	4500	4264	2606	2028	1711	2795	7385	1810	1898	7338	6578	6238	2090	5196	1700
23	7789	7718	6715	5400	5061	6029	5390	5101	4864	3578	2678	2399	2811	6759	1200	796	7899	6891	6521	979	4150	1900
24	7113	7041	6036	4771	4392	5348	4715	4459	4223	3140	2089	1838	2137	6345	727	1110	7239	6209	5839	1419	4173	2414
25	7502	7425	6280	4812	4587	5697	5116	4975	4744	3829	2710	2487	2398	6006	606	523	7697	6530	6147	868	3506	2651
26	7230	7149	5911	4346	4202	5404	4872	4840	4617	3987	2751	2580	2109	5457	451	920	7484	6211	5822	1229	3160	3200
27	7991	7909	6618	4946	4903	6160	5645	5626	5402	4664	3489	3292	2880	5633	1200	694	8262	6952	6559	791	2697	3174
28	7199	7110	5644	3799	3950	5366	4975	5192	4993	4864	3523	3434	2348	4339	1509	1903	7592	6081	5682	2097	2261	4349
29	6312	6219	4637	2689	3001	4514	4245	4669	4503	4927	3554	3569	2036	3432	2197	2938	6797	5147	4752	3182	2816	5254
30	7347	7256	5709	3766	4052	5530	5198	5498	5310	5320	3965	3894	2687	3939	2008	2332	7791	6198	5801	2487	1893	4806
31	7287	7195	5585	3578	3973	5494	5218	5599	5422	5599	4231	4186	2852	3512	2395	2767	7777	6117	5723	2920	1836	5238
32	7228	7133	5447	3374	3923	5481	5287	5772	5614	6004	4630	4616	3153	2919	2948	3370	7779	6035	5649	3523	1944	5837
33	7320	7224	5455	3352	4096	5663	5580	6187	6050	6676	5306	5323	3759	2134	3768	4211	7949	6112	5744	4356	2284	6679
34	7972	7876	6158	4063	4681	6245	6071	6561	6401	6717	5346	5309	3913	2949	3495	3711	8544	6772	6390	3798	1391	6200
35	8159	8065	6405	4343	4845	6387	6141	6539	6363	6467	5111	5042	3784	3545	3104	3190	8679	6974	6584	3249	972	5670
36	8022	7932	6425	4506	4749	6194	5816	6031	5830	5572	4266	4143	3183	4504	2069	2007	8430	6890	6492	2067	1522	4484
37	6840	6744	5006	2907	3578	5147	5032	5618	5479	6116	4749	4777	3190	2367	3321	3875	7441	5635	5259	4057	2488	6306
38	1283	1259	2159	3782	2861	1326	1474	1715	1944	4187	4169	4485	4215	7073	5953	7042	1177	1439	1550	7387	8513	7842
39	895	892	2176	3979	3125	1557	1854	2158	2387	4619	4611	4928	4615	7223	6368	7462	774	1402	1620	7807	8848	8286
40	1780	1752	2378	3754	2759	1358	1228	1235	1468	3687	3706	4021	3866	7075	5567	6642	1608	1744	1750	6986	8261	7366
41	3440	3417	3737	4445	3373	2586	1949	904	932	2125	2571	2849	3390	7679	4779	5742	3093	3273	3148	6069	7966	6007
42	3734	3698	3743	4172	3117	2603	1879	858	735	1724	2007	2292	2862	7330	4211	5174	3501	3385	3197	5501	7430	5506
43	6683	6586	4803	2704	3499	5057	5020	5688	5567	6388	5036	5091	3445	1873	3768	4373	7332	5473	5111	4563	2893	6785
44	7719	7622	5828	3737	4542	6101	6053	6688	6556	7203	5832	5846	4286	1954	4246	4620	8376	6509	6150	4741	2306	7103
45	3888	3821	3159	2946	1982	2221	1505	1314	1108	2257	1511	1818	1539	5961	3160	4232	3993	3109	2787	4576	6102	5172
46	5964	5879	4566	3016	2852	4126	3664	3822	3622	3680	2306	2295	976	4637	1220	2262	6291	4902	4507	2584	3610	4243
47	6880	6783	4970	2904	3790	5323	5346	6065	5956	6863	5518	5580	3920	1402	4265	4842	7569	5673	5326	5020	3084	7270
48	6359	6294	5481	4527	3945	4667	3976	3583	3346	2166	1133	857	1780	6602	1406	2101	6405	5549	5202	2404	4995	2746
49	2478	2383	945	1610	850	851	1240	2292	2344	4465	3752	4040	2966	4903	4742	5855	3082	1298	903	6193	6639	7287
50	3428	3350	2419	2200	1187	1628	1078	1510	1404	3062	2250	2538	1698	5353	3485	4597	3705	2490	2129	4942	6014	5819
51	4456	4385	3548	2949	2134	2721	2058	1929	1714	2267	1174	1435	961	5725	2539	3617	4602	3600	3251	3962	5537	4689
52	5019	4955	4260	3669	2880	3365	2650	2251	2015	1684	430	695	1261	6294	2290	3269	5061	4252	3923	3603	5624	4026
53	5902	5851	5405	4934	4127	4415	3658	2967	2743	938	838	688	2396	7455	2648	3303	5778	5295	5002	3581	6229	3204
54	6552	6500	6020	5430	4681	5050	4297	3616	3392	1403	1378	1123	2776	7769	2596	3038	6422	5933	5633	3276	6171	2585
55	7916	7849	6946	5742	5330	6197	5525	5143	4906	3396	2673	2369	3075	7229	1625	1257	7970	7071	6712	1369	4625	1452
56	5484	5407	4330	3178	2693	3682	3101	3062	2845	2774	1400	1433	441	5351	1434	2540	5699	4526	4149	2886	4496	3999
57	6233	6156	5044	3732	3374	4429	3850	3765	3540	3069	1747	1638	1140	5502	688	1791	6442	5267	4887	2136	4027	3434
58	5132	5046	3732	2315	2023	3294	2867	3145	2966	3509	2182	2287	577	4487	1971	3064	5488	4061	3667	3395	4248	4840
59	7215	7132	5812	4146	4097	5380	4892	4947	4732	4279	2996	2855	2136	5080	775	1201	7517	6159	5765	1461	2821	3581
60	8042	7956	6561	4765	4852	6204	5749	5837	5623	5101	3857	3694	3012	5142	1565	1294	8376	6957	6559	1349	2117	3765
61	8185	8093	6484	4463	4873	6386	6090	6419	6233	6191	4852	4760	3612	3941	2756	2764	8665	7017	6622	2811	970	5237
62	6572	6478	4823	2785	3260	4810	4604	5095	4939	5436	4064	4080	2534	3006	2632	3264	7107	5386	4997	3475	2551	5652
63	5871	5775	4043	1951</																		

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DECIBEL - Main Result

Calculation: swt 101 on 80m

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WTG	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
64	7575	7478	5654	3612	4518	6044	6076	6793	6681	7518	6160	6202	4576	1333	4738	5189	8280	6371	6031	5328	2928	7661
65	5791	5694	3918	1816	2621	4171	4165	4886	4782	5820	4513	4615	2909	2154	3646	4442	6441	4581	4218	4685	3614	6721
66	5927	5833	4185	2172	2616	4169	3985	4525	4382	5081	3730	3792	2138	3028	2675	3486	6467	4741	4352	3741	3194	5750

WTG	W	X	Y	Z	AA	AB	AC	AD	AE	AF
1	6966	7241	7376	7384	7409	6937	7723	7030	7089	6891
2	6771	7044	7184	7194	7229	6768	7550	6824	6900	6748
3	6566	6832	6980	6994	7044	6604	7375	6599	6703	6629
4	6289	6538	6698	6718	6792	6397	7133	6288	6436	6495
5	5561	5809	5969	5990	6065	5673	6406	5559	5708	5780
6	5178	5442	5592	5607	5661	5229	5994	5208	5317	5275
7	4851	5107	5263	5282	5348	4941	5687	4863	4996	5030
8	5102	5339	5503	5527	5614	5250	5957	5083	5254	5396
9	4368	4610	4772	4795	4877	4504	5219	4357	4518	4643
10	4024	4240	4408	4437	4542	4231	4883	3977	4180	4443
11	3599	3789	3959	3991	4112	3855	4448	3523	3755	4120
12	5258	5535	5642	5640	5626	5127	5904	5371	5354	4981
13	4987	5266	5385	5387	5389	4899	5685	5083	5095	4801
14	4798	5070	5162	5154	5123	4619	5379	4931	4879	4427
15	4535	4811	4915	4911	4893	4392	5167	4655	4627	4240
16	4206	4484	4609	4613	4625	4143	4931	4292	4320	4080
17	3617	3893	3997	3993	3977	3477	4255	3738	3709	3339
18	3347	3623	3757	3765	3792	3327	4110	3418	3470	3321
19	2854	3129	3233	3229	3214	2715	3495	2978	2945	2594
20	2552	2827	2963	2971	3002	2545	3324	2622	2676	2571
21	2330	2572	2734	2756	2842	2490	3184	2319	2481	2683
22	2226	2435	2604	2633	2743	2464	3083	2171	2382	2730
23	1243	1499	1654	1673	1747	1391	2089	1262	1389	1620
24	1857	2128	2271	2284	2331	1905	2664	1911	1991	2012
25	1460	1737	1848	1848	1852	1371	2158	1582	1559	1374
26	1882	2148	2234	2225	2193	1690	2460	2035	1953	1547
27	1415	1637	1674	1653	1577	1092	1789	1611	1430	818
28	2736	2957	2986	2962	2870	2404	3035	2929	2751	2060
29	3838	4075	4118	4096	4014	3535	4191	4020	3869	3213
30	3100	3299	3309	3280	3170	2734	3294	3301	3095	2348
31	3527	3721	3725	3695	3580	3155	3688	3730	3518	2758
32	4126	4315	4313	4282	4163	3748	4256	4330	4113	3343
33	4949	5130	5120	5087	4961	4563	5032	5155	4930	4147
34	4338	4489	4457	4421	4281	3928	4311	4549	4298	3491
35	3765	3904	3867	3829	3686	3349	3708	3976	3717	2906
36	2605	2766	2747	2712	2583	2201	2659	2815	2571	1773
37	4679	4881	4889	4859	4746	4316	4854	4879	4676	3924
38	7915	8190	8326	8335	8361	7890	8676	7977	8040	7844
39	8342	8618	8753	8760	8784	8310	9097	8407	8465	8256
40	7498	7771	7911	7921	7953	7489	8273	7553	7626	7462
41	6487	6745	6899	6917	6979	6561	7316	6503	6629	6624
42	5924	6184	6338	6355	6415	5994	6751	5944	6066	6055
43	5190	5394	5404	5375	5263	4830	5372	5388	5190	4441
44	5310	5474	5451	5416	5280	4909	5324	5518	5279	4479
45	5098	5372	5509	5517	5546	5080	5864	5161	5223	5054
46	3229	3499	3589	3581	3549	3045	3809	3369	3307	2866
47	5637	5834	5836	5805	5687	5267	5780	5839	5630	4867
48	2786	3044	3199	3216	3282	2882	3621	2805	2930	3003
49	6807	7084	7192	7190	7175	6676	7451	6918	6904	6522
50	5516	5794	5917	5920	5928	5441	6228	5605	5628	5352
51	4495	4771	4904	4912	4936	4465	5251	4565	4617	4433
52	4068	4336	4482	4495	4542	4102	4872	4110	4202	4140

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DECIBEL - Main Result**Calculation:** swt 101 on 80m

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WTG	W	X	Y	Z	AA	AB	AC	AD	AE	AF
53	3865	4099	4263	4288	4379	4030	4722	3841	4018	4203
54	3465	3676	3844	3874	3982	3684	4323	3412	3621	3914
55	1427	1635	1803	1832	1943	1689	2283	1371	1584	1997
56	3460	3738	3860	3862	3871	3386	4173	3554	3570	3321
57	2716	2994	3113	3115	3121	2636	3424	2817	2823	2582
58	4027	4302	4400	4394	4371	3868	4639	4155	4114	3705
59	2123	2373	2435	2420	2362	1863	2593	2295	2169	1627
60	1911	2092	2092	2063	1950	1525	2081	2118	1891	1128
61	3320	3459	3423	3385	3243	2904	3272	3531	3272	2461
62	4117	4337	4362	4337	4238	3781	4382	4310	4131	3420
63	4946	5180	5218	5196	5108	4635	5272	5129	4973	4299
64	5911	6083	6066	6031	5899	5517	5951	6118	5886	5093
65	5340	5572	5609	5586	5496	5026	5654	5524	5366	4684
66	4400	4640	4686	4665	4585	4104	4765	4579	4434	3786

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421 SW 6th Ave., Suite 1000
US-PORTLAND, OR 97204
6027705189
Scott Zeimetz / scott.zeimetz@elpower.com
12/1/2011 6:08 PM/2.7.473

DECIBEL - Main Result

Calculation: swt 113 on 80m

Noise calculation model:

ISO 9613-2 General

Wind speed:

8.0 m/s

Ground attenuation:

General, Ground factor: 0.5

Meteorological coefficient, C0:

0.0 dB

Type of demand in calculation:

1: WTG noise is compared to demand (DK, DE, SE, NL etc.)

Noise values in calculation:

All noise values are mean values (Lwa) (Normal)

Pure tones:

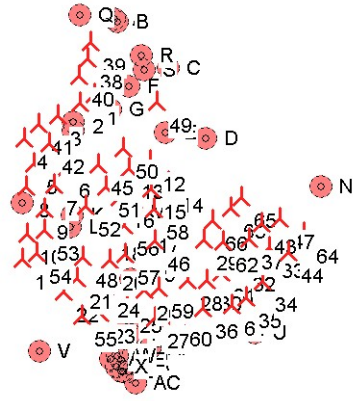
Pure and Impulse tone penalty are added to WTG source noise

Height above ground level, when no value in NSA object:

1.5 m Allow override of model height with height from NSA object

Deviation from "official" noise demands. Negative is more restrictive, positive is less restrictive.:

0.0 dB(A)



WTGs

Table with columns: UTM NAD83 Zone: 14 East, North, Z, Row data/Description, WTG type (Valid, Manufact., Type-generator), Power, Rotor diameter, Hub height, Noise data (Creator, Name), Wind speed, Status, Hub height, Lwa,ref, pure tones, Octave data. The table lists 63 wind turbine entries with their respective coordinates, specifications, and noise data.

To be continued on next page...

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DECIBEL - Main Result

Calculation: swt 113 on 80m

...continued from previous page

UTM NAD83 Zone: 14			WTG type				Noise data				Wind speed		Status		Hub height		LwA,ref		Pure tones		Octave data	
East	North	Z	Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Creator	Name	[m/s]		[m]	[dB(A)]			[m]	[dB(A)]				
UTM NAD83 Zone: 14 [m]																						
64	360,239.00	5,303,663.03	597.4	Siemens	SWT-2.3-113-2300	113.0	113.0	80.0	EMD	Level 0 - Standard setting 0dB - 03-2011	8.0	From other hub height	80.0	105.0	0 dB	Yes	*)					
65	358,583.00	5,304,623.03	598.0	Siemens	SWT-2.3-113-2300	2,300	113.0	80.0	EMD	Level 0 - Standard setting 0dB - 03-2011	8.0	From other hub height	80.0	105.0	0 dB	Yes	*)					
66	357,825.38	5,304,014.60	619.7	Siemens	SWT-2.3-113-2300	113.0	113.0	80.0	EMD	Level 0 - Standard setting 0dB - 03-2011	8.0	From other hub height	80.0	105.0	0 dB	Yes	*)					

*)Notice: One or more noise data for this WTG is generic or input by user

Calculation Results

Sound Level

Noise sensitive area		UTM NAD83 Zone: 14			Demands			Sound Level		Demands fulfilled ?		
No.	Name	East	North	Z	Imission height	Noise	Distance	From WTGs	Noise	Distance	All	
				[m]	[m]	[dB(A)]	[m]	[dB(A)]				
A	Noise sensitive point: (68)	355,226.56	5,309,341.84	581.9	1.5	45.0	403	35.1	Yes	Yes	Yes	
B	Noise sensitive point: User defined (69)	355,287.94	5,309,266.99	582.0	1.5	45.0	403	35.2	Yes	Yes	Yes	
C	Noise sensitive point: User defined (70)	356,648.32	5,308,030.30	585.5	1.5	45.0	403	34.8	Yes	Yes	Yes	
D	Noise sensitive point: User defined (71)	357,647.07	5,306,178.79	589.5	1.5	45.0	403	35.7	Yes	Yes	Yes	
E	Noise sensitive point: User defined (72)	356,582.26	5,306,316.20	589.0	1.5	45.0	403	39.2	Yes	Yes	Yes	
F	Noise sensitive point: User defined (73)	355,604.62	5,307,543.20	594.0	1.5	45.0	403	38.5	Yes	Yes	Yes	
G	Noise sensitive point: User defined (74)	355,125.24	5,306,945.26	605.4	1.5	45.0	403	40.9	Yes	Yes	Yes	
H	Noise sensitive point: User defined (75)	354,119.43	5,306,611.07	642.1	1.5	45.0	403	43.8	Yes	Yes	Yes	
I	Noise sensitive point: User defined (76)	354,133.28	5,306,374.14	643.1	1.5	45.0	403	42.6	Yes	Yes	Yes	
J	Noise sensitive point: User defined (77)	352,764.76	5,304,473.13	650.7	1.5	45.0	403	43.4	Yes	Yes	Yes	
K	Noise sensitive point: User defined (78)	354,097.00	5,304,133.60	636.9	1.5	45.0	403	43.8	Yes	Yes	Yes	
L	Noise sensitive point: User defined (79)	354,038.59	5,303,820.97	637.3	1.5	45.0	403	42.8	Yes	Yes	Yes	
M	Noise sensitive point: User defined (80)	355,699.34	5,304,240.17	649.3	1.5	45.0	403	46.3	No	Yes	No	
N	Noise sensitive point: User defined (81)	360,718.72	5,304,906.48	571.1	1.5	45.0	403	34.1	Yes	Yes	Yes	
O	Noise sensitive point: User defined (82)	355,661.11	5,302,442.59	652.5	1.5	45.0	403	45.0	Yes	Yes	Yes	
P	Noise sensitive point: User defined (83)	355,605.19	5,301,326.78	654.0	1.5	45.0	403	42.5	Yes	Yes	Yes	
Q	Noise sensitive point: User defined (84)	354,310.34	5,309,443.01	586.0	1.5	45.0	403	36.1	Yes	Yes	Yes	
R	Noise sensitive point: User defined (85)	355,940.03	5,308,365.11	585.0	1.5	45.0	403	35.1	Yes	Yes	Yes	
S	Noise sensitive point: User defined (86)	356,023.22	5,307,975.58	588.1	1.5	45.0	403	36.3	Yes	Yes	Yes	
T	Noise sensitive point: User defined (87)	355,634.43	5,303,982.43	647.3	1.5	45.0	403	39.9	Yes	Yes	Yes	
U	Noise sensitive point: User defined (88)	358,960.54	5,301,029.11	616.0	1.5	45.0	403	37.4	Yes	Yes	Yes	
V	Noise sensitive point: User defined (89)	353,242.76	5,300,542.21	637.2	1.5	45.0	403	33.6	Yes	Yes	Yes	
W	Noise sensitive point: User defined (90)	355,305.26	5,300,407.57	639.6	1.5	45.0	403	36.2	Yes	Yes	Yes	
X	Noise sensitive point: User defined (91)	355,287.22	5,300,129.87	634.7	1.5	45.0	403	34.8	Yes	Yes	Yes	
Y	Noise sensitive point: User defined (92)	355,400.97	5,300,004.36	632.0	1.5	45.0	403	34.3	Yes	Yes	Yes	
Z	Noise sensitive point: User defined (93)	355,446.47	5,300,001.22	632.0	1.5	45.0	403	34.3	Yes	Yes	Yes	
AA	Noise sensitive point: User defined (94)	355,618.26	5,299,995.73	632.6	1.5	45.0	403	34.3	Yes	Yes	Yes	
AB	Noise sensitive point: User defined (95)	355,727.81	5,300,487.35	637.9	1.5	45.0	403	36.8	Yes	Yes	Yes	
AC	Noise sensitive point: User defined (96)	355,797.03	5,299,702.92	629.5	1.5	45.0	403	33.1	Yes	Yes	Yes	
AD	Noise sensitive point: User defined (97)	355,109.73	5,300,327.99	640.6	1.5	45.0	403	35.8	Yes	Yes	Yes	
AE	Noise sensitive point: User defined (98)	355,413.02	5,300,293.92	635.7	1.5	45.0	403	35.7	Yes	Yes	Yes	
AF	Noise sensitive point: User defined (99)	356,159.63	5,300,614.61	639.4	1.5	45.0	403	38.1	Yes	Yes	Yes	

Distances (m)

WTG	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	2068	2014	2079	3184	2159	941	595	927	1117	3455	3265	3583	3267	6508	4999	6089	2131	1617	1479	6434	7628	6955
2	2413	2369	2507	3456	2399	1359	824	533	755	3057	2981	3297	3182	6769	4853	5921	2337	2054	1914	6264	7648	6652
3	2971	2938	3181	3970	2897	2031	1412	431	577	2498	2673	2976	3218	7242	4751	5769	2727	2725	2592	6105	7778	6256
4	3972	3951	4253	4830	3767	3101	2431	1371	1330	1711	2417	2660	3476	8004	4699	5600	3585	3809	3673	5915	8019	5657
5	4407	4373	4384	4628	3607	3257	2514	1529	1378	1070	1709	1938	2916	7672	4007	4882	4135	4056	3855	5194	7395	4960
6	4136	4084	3760	3772	2781	2700	1933	1216	984	1512	1281	1588	2099	6782	3420	4401	4052	3563	3298	4732	6650	4916
7	4667	4619	4311	4204	3255	3256	2490	1725	1504	987	951	1211	2196	7095	3237	4137	4537	4119	3855	4455	6627	4433
8	5041	5004	4917	4953	3982	3814	3056	2131	1953	427	1444	1586	2907	7853	3715	4494	4778	4641	4416	4788	7214	4363
9	5361	5313	4962	4676	3794	3932	3168	2418	2199	613	762	842	2343	7385	2970	3741	5214	4802	4527	4038	6496	3776
10	6163	6118	5777	5386	4555	4753	3989	3217	3004	850	1297	1153	2864	7921	3007	3555	5977	5623	5348	3809	6596	3111

To be continued on next page...

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DECIBEL - Main Result

Calculation: swt 113 on 80m

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WTG	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	
11	6824	6776	6368	5828	5064	5374	4614	3878	3662	1502	1756	1518	3183	8171	2929	3269	6650	6251	5963	3479	6478	2473	
12	3859	3772	2484	1601	837	2024	1698	2276	2167	3572	2526	2763	1431	4614	3192	4305	4267	2777	2383	4643	5359	5833	
13	3976	3896	2838	2178	1340	2158	1636	1936	1784	2996	1970	2223	1148	5123	2943	4058	4263	2997	2622	4403	5490	5394	
14	4552	4462	3015	1538	1302	2733	2455	2985	2853	3915	2693	2864	1220	4078	2753	3831	5004	3423	3024	4157	4611	5618	
15	4591	4506	3208	1964	1512	2754	2350	2721	2563	3453	2220	2393	790	4522	2470	3577	4962	3520	3126	3912	4719	5227	
16	4730	4654	3654	2777	2100	2940	2343	2348	2142	2592	1344	1535	509	5374	2193	3296	4941	3797	3428	3642	5086	4586	
17	5450	5367	4126	2753	2429	3617	3127	3274	3076	3305	1940	1994	438	4787	1553	2658	5754	4415	4024	2995	4140	4403	
18	5599	5527	4573	3557	2992	3838	3201	3014	2785	2401	1031	1017	815	5784	1438	2481	5746	4704	4340	2824	4759	3679	
19	6184	6103	4890	3451	3191	4358	3831	3856	3642	3396	2042	1974	1065	5102	794	1894	6449	5169	4781	2231	3741	3764	
20	6394	6321	5316	4123	3685	4623	3996	3786	3554	2774	1541	1360	1430	5965	769	1705	6539	5483	5113	2043	4327	3031	
21	6944	6879	6066	5047	4512	5257	4565	4141	3904	2477	1667	1363	2305	6938	1439	1795	6973	6139	5792	2051	4952	2163	
22	7349	7287	6529	5539	4993	5693	4986	4500	4264	2606	2028	1711	2795	7385	1810	1898	7338	6578	6238	2090	5196	1700	
23	7789	7718	6715	5400	5061	6029	5390	5101	4864	3578	2678	2399	2811	6759	1200	796	7899	6891	6521	979	4150	1900	
24	7113	7041	6036	4771	4392	5348	4715	4459	4223	3140	2089	1838	2137	6345	727	1110	7239	6209	5839	1419	4173	2414	
25	7502	7425	6280	4812	4587	5697	5116	4975	4744	3829	2710	2487	2398	6006	606	523	7697	6530	6147	868	3506	2651	
26	7230	7149	5911	4346	4202	5404	4872	4840	4617	3987	2751	2580	2109	5457	451	920	7484	6211	5822	1229	3160	3200	
27	7991	7909	6618	4946	4903	6160	5645	5626	5402	4664	3489	3292	2880	5633	1200	694	8262	6952	6559	791	2697	3174	
28	7199	7110	5644	3799	3950	5366	4975	5192	4993	4864	3523	3434	2348	4339	1509	1903	7592	6081	5682	2097	2261	4349	
29	6312	6219	4637	2689	3001	4514	4245	4669	4503	4927	3554	3569	2036	3432	2197	2938	6797	5147	4752	3182	2816	5254	
30	7347	7256	5709	3766	4052	5530	5198	5498	5310	5320	3965	3894	2687	3939	2008	2332	7791	6198	5801	2487	1893	4806	
31	7287	7195	5585	3578	3973	5494	5218	5599	5422	5599	4231	4186	2852	3512	2395	2767	7777	6117	5723	2920	1836	5238	
32	7228	7133	5447	3374	3923	5481	5287	5772	5614	6004	4630	4616	3153	2919	2948	3370	7779	6035	5649	3523	1944	5837	
33	7320	7224	5455	3352	4096	5663	5580	6187	6050	6064	5676	5306	5323	3759	2134	3768	4211	7949	6112	5744	4356	2284	6679
34	7972	7876	6158	4063	4681	6245	6071	6561	6401	6717	5346	5309	3913	2949	3495	3711	8544	6772	6390	3798	1391	6200	
35	8159	8065	6405	4343	4845	6387	6141	6539	6363	6467	5111	5042	3784	3545	3104	3190	8679	6974	6584	3249	972	5670	
36	8022	7932	6425	4506	4749	6194	5816	6031	5830	5572	4266	4143	3183	4504	2069	2007	8430	6890	6492	2067	1522	4484	
37	6840	6744	5006	2907	3578	5147	5032	5618	5479	6116	4749	4777	3190	2367	3321	3875	7441	5635	5259	4057	2488	6306	
38	1283	1259	2159	3782	2861	1326	1474	1715	1944	4187	4169	4485	4215	7073	5953	7042	1177	1439	1550	7387	8513	7842	
39	895	892	2176	3979	3125	1557	1854	2158	2387	4619	4611	4928	4615	7223	6368	7462	774	1402	1620	7807	8848	8286	
40	1780	1752	2378	3754	2759	1358	1228	1235	1468	3687	3706	4021	3866	7075	5567	6642	1608	1744	1750	6986	8261	7366	
41	3440	3417	3737	4445	3373	2586	1949	904	932	2125	2571	2849	3390	7679	4779	5742	3093	3273	3148	6069	7966	6007	
42	3734	3698	3743	4172	3117	2603	1879	858	735	1724	2007	2292	2862	7330	4211	5174	3501	3385	3197	5501	7430	5506	
43	6683	6586	4803	2704	3499	5057	5020	5688	5567	6388	5036	5091	3445	1873	3768	4373	7332	5473	5111	4563	2893	6785	
44	7719	7622	5828	3737	4542	6101	6053	6688	6556	7203	5832	5846	4286	1954	4246	4620	8376	6509	6150	4741	2306	7103	
45	3888	3821	3159	2946	1982	2221	1505	1314	1108	2257	1511	1818	1539	5961	3160	4232	3993	3109	2787	4576	6102	5172	
46	5964	5879	4566	3016	2852	4126	3664	3822	3622	3680	2306	2295	976	4637	1220	2262	6291	4902	4507	2584	3610	4243	
47	6880	6783	4970	2904	3790	5323	5346	6065	5956	6863	5518	5580	3920	1402	4265	4842	7569	5673	5326	5020	3084	7270	
48	6359	6294	5481	4527	3945	4667	3976	3583	3346	2166	1133	857	1780	6602	1406	2101	6405	5549	5202	2404	4995	2746	
49	2478	2383	945	1610	850	1240	2292	2344	4465	3752	4040	2966	4903	4742	5855	3082	1298	903	6193	6639	7287		
50	3428	3350	2419	2200	1187	1628	1078	1510	1404	3062	2250	2538	1698	5353	3485	4597	3705	2490	2129	4942	6014	5819	
51	4456	4385	3548	2949	2134	2721	2058	1929	1714	2267	1174	1435	961	5725	2539	3617	4602	3600	3251	3962	5537	4689	
52	5019	4955	4260	3669	2880	3365	2650	2251	2015	1684	430	695	1261	6294	2290	3269	5061	4252	3923	3603	5624	4026	
53	5902	5851	5405	4934	4127	4415	3658	2967	2743	938	838	688	2396	7455	2648	3303	5778	5295	5002	3581	6229	3204	
54	6552	6500	6020	5430	4681	5050	4297	3616	3392	1403	1378	1123	2776	7769	2596	3038	6422	5933	5633	3276	6171	2585	
55	7916	7849	6946	5742	5330	6197	5525	5143	4906	3396	2673	2369	3075	7229	1625	1257	7970	7071	6712	1369	4625	1452	
56	5484	5407	4330	3178	2693	3682	3101	3062	2845	2774	1400	1433	441	5351	1434	2540	5699	4526	4149	2886	4496	3999	
57	6233	6156	5044	3732	3374	4429	3850	3765	3540	3069	1747	1638	1140	5502	688	1791	6442	5267	4887	2136	4027	3434	
58	5132	5046	3732	2315	2023	3294	2867	3145	2966	3509	2182	2287	577	4487	1971	3064	5488	4061	3667	3395	4248	4840	
59	7215	7132	5812	4146	4097	5380	4892	4947	4732	4279	2996	2855	2136	5080	775	1201	7517	6159	5765	1461	2821	3581	
60	8042	7956	6561	4765	4852	6204	5749	5837	5623	5101	3857	3694	3012	5142	1565	1294	8376	6957	6559	1349	2117	3765	
61	8185	8093	6484	4463	4873	6386	6090	6419	6233	6191	4852	4760	3612	3941	2756	2764	8665	7017	6622	2811	970	5237	
62	6572	6478	4823	2785	3260	4810	4604	5095	4939	5436	4064	4080	2534	3006	2632	3264	7107	5386	4997	3475	2551	5652	
63	5871	5775	4043	1951	2619	4187	4108	4760	4639	5540	4211	4296	2606	2481	3253	4045	6478	4666	4290	4290	3377	6328	
64	7575	7478	5654	3612	4518	6044	6076	6793	6681	7518	6160	6202	4576	1333	4738	5189	8280	6371	6031	5328	2928	7661	
65	5791	5694	3918	1816	2621	4171	4165	4886	4782	5820	4513	4615	2909	2154	3646								

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6027705189

Scott Zeimetz / scott.zeimetz@elpower.com

Calculated:

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DECIBEL - Main Result

Calculation: swt 113 on 80m

WTG	W	X	Y	Z	AA	AB	AC	AD	AE	AF
1	6966	7241	7376	7384	7409	6937	7723	7030	7089	6891
2	6771	7044	7184	7194	7229	6768	7550	6824	6900	6748
3	6566	6832	6980	6994	7044	6604	7375	6599	6703	6629
4	6289	6538	6698	6718	6792	6397	7133	6288	6436	6495
5	5561	5809	5969	5990	6065	5673	6406	5559	5708	5780
6	5178	5442	5592	5607	5661	5229	5994	5208	5317	5275
7	4851	5107	5263	5282	5348	4941	5687	4863	4996	5030
8	5102	5339	5503	5527	5614	5250	5957	5083	5254	5396
9	4368	4610	4772	4795	4877	4504	5219	4357	4518	4643
10	4024	4240	4408	4437	4542	4231	4883	3977	4180	4443
11	3599	3789	3959	3991	4112	3855	4448	3523	3755	4120
12	5258	5535	5642	5640	5626	5127	5904	5371	5354	4981
13	4987	5266	5385	5387	5389	4899	5685	5083	5095	4801
14	4798	5070	5162	5154	5123	4619	5379	4931	4879	4427
15	4535	4811	4915	4911	4893	4392	5167	4655	4627	4240
16	4206	4484	4609	4613	4625	4143	4931	4292	4320	4080
17	3617	3893	3997	3993	3977	3477	4255	3738	3709	3339
18	3347	3623	3757	3765	3792	3327	4110	3418	3470	3321
19	2854	3129	3233	3229	3214	2715	3495	2978	2945	2594
20	2552	2827	2963	2971	3002	2545	3324	2622	2676	2571
21	2330	2572	2734	2756	2842	2490	3184	2319	2481	2683
22	2226	2435	2604	2633	2743	2464	3083	2171	2382	2730
23	1243	1499	1654	1673	1747	1391	2089	1262	1389	1620
24	1857	2128	2271	2284	2331	1905	2664	1911	1991	2012
25	1460	1737	1848	1848	1852	1371	2158	1582	1559	1374
26	1882	2148	2234	2225	2193	1690	2460	2035	1953	1547
27	1415	1637	1674	1653	1577	1092	1789	1611	1430	818
28	2736	2957	2986	2962	2870	2404	3035	2929	2751	2060
29	3838	4075	4118	4096	4014	3535	4191	4020	3869	3213
30	3100	3299	3309	3280	3170	2734	3294	3301	3095	2348
31	3527	3721	3725	3695	3580	3155	3688	3730	3518	2758
32	4126	4315	4313	4282	4163	3748	4256	4330	4113	3343
33	4949	5130	5120	5087	4961	4563	5032	5155	4930	4147
34	4338	4489	4457	4421	4281	3928	4311	4549	4298	3491
35	3765	3904	3867	3829	3686	3349	3708	3976	3717	2906
36	2605	2766	2747	2712	2583	2201	2659	2815	2571	1773
37	4679	4881	4889	4859	4746	4316	4854	4879	4676	3924
38	7915	8190	8326	8335	8361	7890	8676	7977	8040	7844
39	8342	8618	8753	8760	8784	8310	9097	8407	8465	8256
40	7498	7771	7911	7921	7953	7489	8273	7553	7626	7462
41	6487	6745	6899	6917	6979	6561	7316	6503	6629	6624
42	5924	6184	6338	6355	6415	5994	6751	5944	6066	6055
43	5190	5394	5404	5375	5263	4830	5372	5388	5190	4441
44	5310	5474	5451	5416	5280	4909	5324	5518	5279	4479
45	5098	5372	5509	5517	5546	5080	5864	5161	5223	5054
46	3229	3499	3589	3581	3549	3045	3809	3369	3307	2866
47	5637	5834	5836	5805	5687	5267	5780	5839	5630	4867
48	2786	3044	3199	3216	3282	2882	3621	2805	2930	3003
49	6807	7084	7192	7190	7175	6676	7451	6918	6904	6522
50	5516	5794	5917	5920	5928	5441	6228	5605	5628	5352
51	4495	4771	4904	4912	4936	4465	5251	4565	4617	4433
52	4068	4336	4482	4495	4542	4102	4872	4110	4202	4140
53	3865	4099	4263	4288	4379	4030	4722	3841	4018	4203
54	3465	3676	3844	3874	3982	3684	4323	3412	3621	3914
55	1427	1635	1803	1832	1943	1689	2283	1371	1584	1997
56	3460	3738	3860	3862	3871	3386	4173	3554	3570	3321
57	2716	2994	3113	3115	3121	2636	3424	2817	2823	2582
58	4027	4302	4400	4394	4371	3868	4639	4155	4114	3705

To be continued on next page...

Project:

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Licensed user:

Element Power

421 SW 6th Ave., Suite 1000

US-PORTLAND, OR 97204

6027705189

Scott Zeimetz / scott.zeimetz@elpower.com

Calculated:

12/1/2011 6:08 PM/2.7.473

DECIBEL - Main Result**Calculation:** swt 113 on 80m*...continued from previous page*

WTG	W	X	Y	Z	AA	AB	AC	AD	AE	AF
59	2123	2373	2435	2420	2362	1863	2593	2295	2169	1627
60	1911	2092	2092	2063	1950	1525	2081	2118	1891	1128
61	3320	3459	3423	3385	3243	2904	3272	3531	3272	2461
62	4117	4337	4362	4337	4238	3781	4382	4310	4131	3420
63	4946	5180	5218	5196	5108	4635	5272	5129	4973	4299
64	5911	6083	6066	6031	5899	5517	5951	6118	5886	5093
65	5340	5572	5609	5586	5496	5026	5654	5524	5366	4684
66	4400	4640	4686	4665	4585	4104	4765	4579	4434	3786

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6027705189
Scott Zeimetz / scott.zeimetz@elpower.com
Calculated:
12/1/2011 6:28 PM/2.7.473

DECIBEL - Main Result

Calculation: GE 16 on 80m

Noise calculation model:

ISO 9613-2 General

Wind speed:

8.0 m/s

Ground attenuation:

General, Ground factor: 0.5

Meteorological coefficient, C0:

0.0 dB

Type of demand in calculation:

1: WTG noise is compared to demand (DK, DE, SE, NL etc.)

Noise values in calculation:

All noise values are mean values (Lwa) (Normal)

Pure tones:

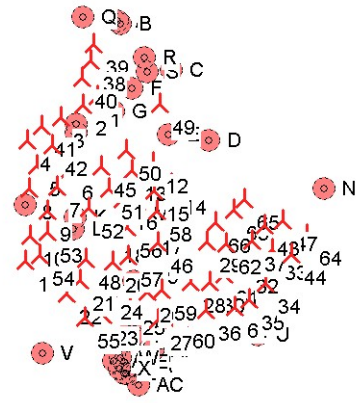
Pure and Impulse tone penalty are added to WTG source noise

Height above ground level, when no value in NSA object:

1.5 m Allow override of model height with height from NSA object

Deviation from "official" noise demands. Negative is more restrictive, positive is less restrictive.:

0.0 dB(A)



WTGs

UTM NAD83 Zone: 14				Row data/Description	WTG type		Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Noise data		Wind speed [m/s]	Status	Hub height [m]	LwA_ref [dB(A)]	Pure tones	Octave data
East	North	Z	Valid		Manufact.	Creator					Name							
UTM NAD83 Zone: 14				[m]														
1	354,684.90	5,307,345.60	624.0	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
2	354,317.45	5,307,106.32	642.0	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
3	353,722.96	5,306,779.95	651.0	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
4	352,817.18	5,306,183.44	654.7	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
5	353,069.42	5,305,498.97	660.2	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
6	353,954.72	5,304,406.57	644.9	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
7	353,624.15	5,304,958.49	656.0	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
8	352,865.53	5,304,888.50	653.3	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
9	353,357.51	5,304,316.72	655.7	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
10	352,900.35	5,303,634.39	656.0	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
11	352,780.38	5,302,971.62	658.0	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
12	356,156.06	5,305,596.04	634.0	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
13	355,618.51	5,305,385.20	640.8	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
14	356,642.05	5,305,015.13	634.0	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
15	356,196.77	5,304,854.09	642.0	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
16	355,352.86	5,304,613.58	648.9	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
17	356,028.45	5,303,951.33	644.9	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
18	355,052.31	5,303,745.36	652.3	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
19	355,911.51	5,303,196.30	654.0	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
20	355,083.30	5,302,949.79	658.0	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
21	354,222.64	5,302,470.88	648.5	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
22	353,880.16	5,302,233.41	652.0	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
23	354,845.27	5,301,562.12	652.0	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
24	354,964.81	5,301,233.41	659.9	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
25	355,551.10	5,301,846.75	658.8	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
26	356,007.28	5,302,154.02	654.0	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
27	356,292.35	5,301,421.86	655.6	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
28	357,169.95	5,302,410.18	644.0	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
29	357,592.26	5,303,490.34	632.0	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
30	357,669.32	5,302,412.86	646.0	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
31	358,049.42	5,302,623.53	649.5	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
32	358,568.17	5,302,932.69	643.4	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
33	359,334.06	5,303,282.30	628.0	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
34	359,155.93	5,302,405.91	638.0	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
35	358,729.16	5,301,972.85	638.0	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
36	357,582.13	5,301,673.51	642.0	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
37	358,805.35	5,303,512.73	628.0	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
38	354,503.62	5,308,282.46	606.0	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
39	354,583.85	5,308,718.69	595.2	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
40	354,278.58	5,307,835.27	622.7	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
41	353,217.36	5,306,549.18	663.3	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
42	353,477.02	5,306,042.92	650.0	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
43	359,128.80	5,303,916.93	616.1	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
44	359,846.75	5,303,158.30	618.3	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
45	354,785.53	5,305,477.69	621.6	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
46	356,307.54	5,303,487.12	636.9	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
47	359,614.17	5,304,042.60	600.0	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
48	354,387.00	5,303,038.03	644.0	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
49	356,350.68	5,307,133.73	596.0	GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
50	355,462.34	5,																

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Calculated:
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DECIBEL - Main Result

Calculation: GE 16 on 80m

...continued from previous page

UTM NAD83 Zone: 14			WTG type		Noise data												
East	North	Z	Row data/Description	Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Creator	Name	Wind speed [m/s]	Status	Hub height [m]	LwA_ref [dB(A)]	Pure tones	Octave data
UTM NAD83 Zone: 14		[m]															
54	353,156.97	5,303,125.82	649.7 GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
55	354,356.64	5,301,473.64	644.5 GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
56	355,470.76	5,303,863.43	652.0 GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
57	355,516.48	5,303,115.24	656.0 GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
58	356,270.80	5,304,317.44	640.0 GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
59	356,404.56	5,302,223.42	647.1 GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
60	356,890.59	5,301,473.85	640.0 GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
61	358,333.55	5,301,769.19	637.6 GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
62	358,100.22	5,303,431.13	634.0 GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
63	358,303.12	5,304,341.26	609.6 GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
64	360,239.00	5,303,663.03	597.4 GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
65	358,583.00	5,304,623.03	598.0 GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)
66	357,825.38	5,304,014.60	619.7 GE WIND ENERGY GE 1.6 160...	Yes	GE WIND ENERGY	GE 1.6-1,600	1,600	82.5	80.0	USER	Runtime input	8.0	User value	80.0	103.9	0 dB	Generic *)

*)Notice: One or more noise data for this WTG is generic or input by user

Calculation Results

Sound Level

Noise sensitive area			UTM NAD83 Zone: 14			Demands		Sound Level		Demands fulfilled ?		
No.	Name		East	North	Z	Imission height	Noise	Distance	From WTGs	Noise	Distance	All
						[m]	[dB(A)]	[m]	[dB(A)]			
A	Noise sensitive point: (68)		355,226.56	5,309,341.84	581.9	1.5	45.0	403	34.5	Yes	Yes	Yes
B	Noise sensitive point: User defined (69)		355,287.94	5,309,266.99	582.0	1.5	45.0	403	34.6	Yes	Yes	Yes
C	Noise sensitive point: User defined (70)		356,648.32	5,308,030.30	585.5	1.5	45.0	403	34.2	Yes	Yes	Yes
D	Noise sensitive point: User defined (71)		357,647.07	5,306,178.79	589.5	1.5	45.0	403	35.1	Yes	Yes	Yes
E	Noise sensitive point: User defined (72)		356,582.26	5,306,316.20	589.0	1.5	45.0	403	38.5	Yes	Yes	Yes
F	Noise sensitive point: User defined (73)		355,604.62	5,307,543.20	594.0	1.5	45.0	403	37.8	Yes	Yes	Yes
G	Noise sensitive point: User defined (74)		355,125.24	5,306,945.26	605.4	1.5	45.0	403	40.1	Yes	Yes	Yes
H	Noise sensitive point: User defined (75)		354,119.43	5,306,611.07	642.1	1.5	45.0	403	43.0	Yes	Yes	Yes
I	Noise sensitive point: User defined (76)		354,133.28	5,306,374.14	643.1	1.5	45.0	403	41.8	Yes	Yes	Yes
J	Noise sensitive point: User defined (77)		352,764.76	5,304,473.13	650.7	1.5	45.0	403	42.6	Yes	Yes	Yes
K	Noise sensitive point: User defined (78)		354,097.00	5,304,133.60	636.9	1.5	45.0	403	43.0	Yes	Yes	Yes
L	Noise sensitive point: User defined (79)		354,038.59	5,303,820.97	637.3	1.5	45.0	403	42.0	Yes	Yes	Yes
M	Noise sensitive point: User defined (80)		355,699.34	5,304,240.17	649.3	1.5	45.0	403	45.4	No	Yes	No
N	Noise sensitive point: User defined (81)		360,718.72	5,304,906.48	571.1	1.5	45.0	403	33.6	Yes	Yes	Yes
O	Noise sensitive point: User defined (82)		355,661.11	5,302,442.59	652.5	1.5	45.0	403	44.2	Yes	Yes	Yes
P	Noise sensitive point: User defined (83)		355,605.19	5,301,326.78	654.0	1.5	45.0	403	41.7	Yes	Yes	Yes
Q	Noise sensitive point: User defined (84)		354,310.34	5,309,443.01	586.0	1.5	45.0	403	35.4	Yes	Yes	Yes
R	Noise sensitive point: User defined (85)		355,940.03	5,308,365.11	585.0	1.5	45.0	403	34.5	Yes	Yes	Yes
S	Noise sensitive point: User defined (86)		356,023.22	5,307,975.58	588.1	1.5	45.0	403	35.7	Yes	Yes	Yes
T	Noise sensitive point: User defined (87)		355,634.43	5,300,982.43	647.3	1.5	45.0	403	39.2	Yes	Yes	Yes
U	Noise sensitive point: User defined (88)		358,960.54	5,301,029.11	616.0	1.5	45.0	403	36.7	Yes	Yes	Yes
V	Noise sensitive point: User defined (89)		353,242.76	5,300,542.21	637.2	1.5	45.0	403	33.1	Yes	Yes	Yes
W	Noise sensitive point: User defined (90)		355,305.26	5,300,407.57	639.6	1.5	45.0	403	35.6	Yes	Yes	Yes
X	Noise sensitive point: User defined (91)		355,287.22	5,300,129.87	634.7	1.5	45.0	403	34.3	Yes	Yes	Yes
Y	Noise sensitive point: User defined (92)		355,400.97	5,300,004.36	632.0	1.5	45.0	403	33.7	Yes	Yes	Yes
Z	Noise sensitive point: User defined (93)		355,446.47	5,300,001.22	632.0	1.5	45.0	403	33.7	Yes	Yes	Yes
AA	Noise sensitive point: User defined (94)		355,618.26	5,299,995.73	632.6	1.5	45.0	403	33.8	Yes	Yes	Yes
AB	Noise sensitive point: User defined (95)		355,727.81	5,300,487.35	637.9	1.5	45.0	403	36.2	Yes	Yes	Yes
AC	Noise sensitive point: User defined (96)		355,797.03	5,299,702.92	629.5	1.5	45.0	403	32.6	Yes	Yes	Yes
AD	Noise sensitive point: User defined (97)		355,109.73	5,300,327.99	640.6	1.5	45.0	403	35.2	Yes	Yes	Yes
AE	Noise sensitive point: User defined (98)		355,413.02	5,300,293.92	635.7	1.5	45.0	403	35.1	Yes	Yes	Yes
AF	Noise sensitive point: User defined (99)		356,159.63	5,300,614.61	639.4	1.5	45.0	403	37.4	Yes	Yes	Yes

Project:
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12/1/2011 6:28 PM/2.7.473

DECIBEL - Main Result

Calculation: GE 16 on 80m

Distances (m)

WTG	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	2068	2014	2079	3184	2159	941	595	927	1117	3455	3265	3583	3267	6508	4999	6089	2131	1617	1479	6434	7628	6955
2	2413	2369	2507	3456	2399	1359	824	533	755	3057	2981	3297	3182	6769	4853	5921	2337	2054	1914	6264	7648	6652
3	2971	2938	3181	3970	2897	2031	1412	431	577	2498	2673	2976	3218	7242	4751	5769	2727	2725	2592	6105	7778	6256
4	3972	3951	4253	4830	3767	3101	2431	1371	1330	1711	2417	2660	3476	8004	4699	5600	3585	3809	3673	5915	8019	5657
5	4407	4373	4384	4628	3607	3257	2514	1529	1378	1070	1709	1938	2916	7672	4007	4882	4135	4056	3855	5194	7395	4960
6	4136	4084	3760	3772	2781	2700	1933	1216	984	1512	1281	1588	2099	6782	3420	4401	4052	3563	3298	4732	6650	4916
7	4667	4619	4311	4204	3255	3256	2490	1725	1504	987	951	1211	2196	7095	3237	4137	4537	4119	3855	4455	6627	4433
8	5041	5004	4917	4953	3982	3814	3056	2131	1953	427	1444	1586	2907	7853	3715	4494	4778	4641	4416	4788	7214	4363
9	5361	5313	4962	4676	3794	3932	3168	2418	2199	613	762	842	2343	7385	2970	3741	5214	4802	4527	4038	6496	3776
10	6163	6118	5777	5386	4555	4753	3989	3217	3004	850	1297	1153	2864	7921	3007	3555	5977	5623	5348	3809	6596	3111
11	6824	6776	6368	5828	5064	5374	4614	3878	3662	1502	1756	1518	3183	8171	2929	3269	6650	6251	5963	3479	6478	2473
12	3859	3772	2484	1601	837	2024	1698	2276	2167	3572	2526	2763	1431	4614	3192	4305	4267	2777	2383	4643	5359	5833
13	3976	3896	2838	2178	1340	2158	1636	1936	1784	2996	1970	2223	1148	5123	2943	4058	4263	2997	2622	4403	5490	5394
14	4552	4462	3015	1538	1302	2733	2455	2985	2853	3915	2693	2864	1220	4078	2753	3831	5004	3423	3024	4157	4611	5618
15	4591	4506	3208	1964	1512	2754	2350	2721	2563	3453	2220	2393	790	4522	2470	3577	4962	3520	3126	3912	4719	5227
16	4730	4654	3654	2777	2100	2940	2343	2348	2142	2592	1344	1535	509	5374	2193	3296	4941	3797	3428	3642	5086	4586
17	5450	5367	4126	2753	2429	3617	3127	3274	3076	3305	1940	1994	438	4787	1553	2658	5754	4415	4024	2995	4140	4403
18	5599	5527	4573	3557	2992	3838	3201	3014	2785	2401	1031	1017	815	5784	1438	2481	5746	4704	4340	2824	4759	3679
19	6184	6103	4890	3451	3191	4358	3831	3856	3642	3396	2042	1974	1065	5102	794	1894	6449	5169	4781	2231	3741	3764
20	6394	6321	5316	4123	3685	4623	3996	3786	3554	2774	1541	1360	1430	5965	769	1705	6539	5483	5113	2043	4327	3031
21	6944	6879	6066	5047	4512	5257	4565	4141	3904	2477	1667	1363	2305	6938	1439	1795	6973	6139	5792	2051	4952	2163
22	7349	7287	6529	5539	4993	5693	4986	4500	4264	2606	2028	1711	2795	7385	1810	1898	7338	6578	6238	2090	5196	1700
23	7789	7718	6715	5400	5061	6029	5390	5101	4864	3578	2678	2399	2811	6759	1200	796	7899	6891	6521	979	4150	1900
24	7113	7041	6036	4771	4392	5348	4715	4459	4223	3140	2089	1838	2137	6345	727	1110	7239	6209	5839	1419	4173	2414
25	7502	7425	6280	4812	4587	5697	5116	4975	4744	3829	2710	2487	2398	6006	606	523	7697	6530	6147	868	3506	2651
26	7230	7149	5911	4346	4202	5404	4872	4840	4617	3987	2751	2580	2109	5457	451	920	7484	6211	5822	1229	3160	3200
27	7991	7909	6618	4946	4903	6160	5645	5626	5402	4664	3489	3292	2880	5633	1200	694	8262	6952	6559	791	2697	3174
28	7199	7110	5644	3799	3950	5366	4975	5192	4993	4864	3523	3434	2348	4339	1509	1903	7592	6081	5682	2097	2261	4349
29	6312	6219	4637	2689	3001	4514	4245	4669	4503	4927	3554	3569	2036	3432	2197	2938	6797	5147	4752	3182	2816	5254
30	7347	7256	5709	3766	4052	5530	5198	5498	5310	5320	3965	3894	2687	3939	2008	2332	7791	6198	5801	2487	1893	4806
31	7287	7195	5585	3578	3973	5494	5218	5599	5422	5599	4231	4186	2852	3512	2395	2767	7777	6117	5723	2920	1836	5238
32	7228	7133	5447	3374	3923	5481	5287	5772	5614	6004	4630	4616	3153	2919	2948	3370	7779	6035	5649	3523	1944	5837
33	7320	7224	5455	3352	4096	5663	5580	6187	6050	6676	5306	5323	3759	2134	3768	4211	7949	6112	5744	4356	2284	6679
34	7972	7876	6158	4063	4681	6245	6071	6561	6401	6717	5346	5309	3913	2949	3495	3711	8544	6772	6390	3798	1391	6200
35	8159	8065	6405	4343	4845	6387	6141	6539	6363	6467	5111	5042	3784	3545	3104	3190	8679	6974	6584	3249	972	5670
36	8022	7932	6425	4506	4749	6194	5816	6031	5830	5572	4266	4143	3183	4504	2069	2007	8430	6890	6492	2067	1522	4484
37	6840	6744	5006	2907	3578	5147	5032	5618	5479	6116	4749	4777	3190	2367	3321	3875	7441	5635	5259	4057	2488	6306
38	1283	1259	2159	3782	2861	1326	1474	1715	1944	4187	4169	4485	4215	7073	5953	7042	1177	1439	1550	7387	8513	7842
39	895	892	2176	3979	3125	1557	1854	2158	2387	4619	4611	4928	4615	7223	6368	7462	774	1402	1620	7807	8848	8286
40	1780	1752	2378	3754	2759	1358	1228	1235	1468	3687	3706	4021	3866	7075	5567	6642	1608	1744	1750	6986	8261	7366
41	3440	3417	3737	4445	3373	2586	1949	904	932	2125	2571	2849	3390	7679	4779	5742	3093	3273	3148	6069	7966	6007
42	3734	3698	3743	4172	3117	2603	1879	858	735	1724	2007	2292	2862	7330	4211	5174	3501	3385	3197	5501	7430	5506
43	6683	6586	4803	2704	3499	5057	5020	5688	5567	6388	5036	5091	3445	1873	3768	4373	7332	5473	5111	4563	2893	6785
44	7719	7622	5828	3737	4542	6101	6053	6688	6556	7203	5832	5846	4286	1954	4246	4620	8376	6509	6150	4741	2306	7103
45	3888	3821	3159	2946	1982	2221	1505	1314	1108	2257	1511	1818	1539	5961	3160	4232	3993	3109	2787	4576	6102	5172
46	5964	5879	4566	3016	2852	4126	3664	3822	3622	3680	2306	2295	976	4637	1220	2262	6291	4902	4507	2584	3610	4243
47	6880	6783	4970	2904	3790	5323	5346	6065	5956	6863	5518	5580	3920	1402	4265	4842	7569	5673	5326	5020	3084	7270
48	6359	6294	5481	4527	3945	4667	3976	3583	3346	2166	1133	857	1780	6602	1406	2101	6405	5549	5202	2404	4995	2746
49	2478	2383	945	1610	850	851	1240	2292	2344	4465	3752	4040	2966	4903	4742	5855	3082	1298	903	6193	6639	7287
50	3428	3350	2419	2200	1187	1628	1078	1510	1404	3062	2250	2538	1698	5353	3485	4597	3705	2490	2129	4942	6014	5819
51	4456	4385	3548	2949	2134	2721	2058	1929	1714	2267	1174	1435	961	5725	2539	3617	4602	3600	3251	3962	5537	4689
52	5019	4955	4260	3669	2880	3365	2650	2251	2015	1684	430	695	1261	6294	2290	3269	5061	4252	3923	3603	5624	4026
53	5902	5851	5405	4934	4127	4415	3658	2967	2743	938	838	688	2396	7455	2648	3303	5778	5295	5002	3581	6229	3204
54	6552	6500	6020	5430	4681	5050	4297	3616	3392	1403	1378	1123	2776	7769	2596	3038	6422	5933	5633	3276	6171	2585
55	7916	7849	6946	5742	5330	6197	5525	5143	4906	3396	2673	2369	3075	7229	1625	1257	7970	7071	6712	1369	4625	1452
56	5484	5407	4330	3178	2693	3682	3101	3062	2845	2774	1400	1433	441	5351	1434	2540	5699	4526	4149	2886	4496	3999
57	6233	6156	5044	3732	3374																	

Project:
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12/1/2011 6:28 PM/2.7.473

DECIBEL - Main Result

Calculation: GE 16 on 80m

...continued from previous page

WTG	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
58	5132	5046	3732	2315	2023	3294	2867	3145	2966	3509	2182	2287	577	4487	1971	3064	5488	4061	3667	3395	4248	4840
59	7215	7132	5812	4146	4097	5380	4892	4947	4732	4279	2996	2855	2136	5080	775	1201	7517	6159	5765	1461	2821	3581
60	8042	7956	6561	4765	4852	6204	5749	5837	5623	5101	3857	3694	3012	5142	1565	1294	8376	6957	6559	1349	2117	3765
61	8185	8093	6484	4463	4873	6386	6090	6419	6233	6191	4852	4760	3612	3941	2756	2764	8665	7017	6622	2811	970	5237
62	6572	6478	4823	2785	3260	4810	4604	5095	4939	5436	4064	4080	2534	3006	2632	3264	7107	5386	4997	3475	2551	5652
63	5871	5775	4043	1951	2619	4187	4108	4760	4639	5540	4211	4296	2606	2481	3253	4045	6478	4666	4290	4290	3377	6328
64	7575	7478	5654	3612	4518	6044	6076	6793	6681	7518	6160	6202	4576	1333	4738	5189	8280	6371	6031	5328	2928	7661
65	5791	5694	3918	1816	2621	4171	4165	4886	4782	5820	4513	4615	2909	2154	3646	4442	6441	4581	4218	4685	3614	6721
66	5927	5833	4185	2172	2616	4169	3985	4525	4382	5081	3730	3792	2138	3028	2675	3486	6467	4741	4352	3741	3194	5750

WTG	W	X	Y	Z	AA	AB	AC	AD	AE	AF
1	6966	7241	7376	7384	7409	6937	7723	7030	7089	6891
2	6771	7044	7184	7194	7229	6768	7550	6824	6900	6748
3	6566	6832	6980	6994	7044	6604	7375	6599	6703	6629
4	6289	6538	6698	6718	6792	6397	7133	6288	6436	6495
5	5561	5809	5969	5990	6065	5673	6406	5559	5708	5780
6	5178	5442	5592	5607	5661	5229	5994	5208	5317	5275
7	4851	5107	5263	5282	5348	4941	5687	4863	4996	5030
8	5102	5339	5503	5527	5614	5250	5957	5083	5254	5396
9	4368	4610	4772	4795	4877	4504	5219	4357	4518	4643
10	4024	4240	4408	4437	4542	4231	4883	3977	4180	4443
11	3599	3789	3959	3991	4112	3855	4448	3523	3755	4120
12	5258	5535	5642	5640	5626	5127	5904	5371	5354	4981
13	4987	5266	5385	5387	5389	4899	5685	5083	5095	4801
14	4798	5070	5162	5154	5123	4619	5379	4931	4879	4427
15	4535	4811	4915	4911	4893	4392	5167	4655	4627	4240
16	4206	4484	4609	4613	4625	4143	4931	4292	4320	4080
17	3617	3893	3997	3993	3977	3477	4255	3738	3709	3339
18	3347	3623	3757	3765	3792	3327	4110	3418	3470	3321
19	2854	3129	3233	3229	3214	2715	3495	2978	2945	2594
20	2552	2827	2963	2971	3002	2545	3324	2622	2676	2571
21	2330	2572	2734	2756	2842	2490	3184	2319	2481	2683
22	2226	2435	2604	2633	2743	2464	3083	2171	2382	2730
23	1243	1499	1654	1673	1747	1391	2089	1262	1389	1620
24	1857	2128	2271	2284	2331	1905	2664	1911	1991	2012
25	1460	1737	1848	1848	1852	1371	2158	1582	1559	1374
26	1882	2148	2234	2225	2193	1690	2460	2035	1953	1547
27	1415	1637	1674	1653	1577	1092	1789	1611	1430	818
28	2736	2957	2986	2962	2870	2404	3035	2929	2751	2060
29	3838	4075	4118	4096	4014	3535	4191	4020	3869	3213
30	3100	3299	3309	3280	3170	2734	3294	3301	3095	2348
31	3527	3721	3725	3695	3580	3155	3688	3730	3518	2758
32	4126	4315	4313	4282	4163	3748	4256	4330	4113	3343
33	4949	5130	5120	5087	4961	4563	5032	5155	4930	4147
34	4338	4489	4457	4421	4281	3928	4311	4549	4298	3491
35	3765	3904	3867	3829	3686	3349	3708	3976	3717	2906
36	2605	2766	2747	2712	2583	2201	2659	2815	2571	1773
37	4679	4881	4889	4859	4746	4316	4854	4879	4676	3924
38	7915	8190	8326	8335	8361	7890	8676	7977	8040	7844
39	8342	8618	8753	8760	8784	8310	9097	8407	8465	8256
40	7498	7771	7911	7921	7953	7489	8273	7553	7626	7462
41	6487	6745	6899	6917	6979	6561	7316	6503	6629	6624
42	5924	6184	6338	6355	6415	5994	6751	5944	6066	6055
43	5190	5394	5404	5375	5263	4830	5372	5388	5190	4441
44	5310	5474	5451	5416	5280	4909	5324	5518	5279	4479
45	5098	5372	5509	5517	5546	5080	5864	5161	5223	5054
46	3229	3499	3589	3581	3549	3045	3809	3369	3307	2866

To be continued on next page...

Project:

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421 SW 6th Ave., Suite 1000

US-PORTLAND, OR 97204

6027705189

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Calculated:

12/1/2011 6:28 PM/2.7.473

DECIBEL - Main Result

Calculation: GE 16 on 80m

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WTG	W	X	Y	Z	AA	AB	AC	AD	AE	AF
47	5637	5834	5836	5805	5687	5267	5780	5839	5630	4867
48	2786	3044	3199	3216	3282	2882	3621	2805	2930	3003
49	6807	7084	7192	7190	7175	6676	7451	6918	6904	6522
50	5516	5794	5917	5920	5928	5441	6228	5605	5628	5352
51	4495	4771	4904	4912	4936	4465	5251	4565	4617	4433
52	4068	4336	4482	4495	4542	4102	4872	4110	4202	4140
53	3865	4099	4263	4288	4379	4030	4722	3841	4018	4203
54	3465	3676	3844	3874	3982	3684	4323	3412	3621	3914
55	1427	1635	1803	1832	1943	1689	2283	1371	1584	1997
56	3460	3738	3860	3862	3871	3386	4173	3554	3570	3321
57	2716	2994	3113	3115	3121	2636	3424	2817	2823	2582
58	4027	4302	4400	4394	4371	3868	4639	4155	4114	3705
59	2123	2373	2435	2420	2362	1863	2593	2295	2169	1627
60	1911	2092	2092	2063	1950	1525	2081	2118	1891	1128
61	3320	3459	3423	3385	3243	2904	3272	3531	3272	2461
62	4117	4337	4362	4337	4238	3781	4382	4310	4131	3420
63	4946	5180	5218	5196	5108	4635	5272	5129	4973	4299
64	5911	6083	6066	6031	5899	5517	5951	6118	5886	5093
65	5340	5572	5609	5586	5496	5026	5654	5524	5366	4684
66	4400	4640	4686	4665	4585	4104	4765	4579	4434	3786

Project:
New_Frontier_111117

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Calculated:
12/1/2011 6:34 PM/2.7.473

DECIBEL - Main Result

Calculation: G 90 on 78m

Noise calculation model:

ISO 9613-2 General

Wind speed:

8.0 m/s

Ground attenuation:

General, Ground factor: 0.5

Meteorological coefficient, C0:

0.0 dB

Type of demand in calculation:

1: WTG noise is compared to demand (DK, DE, SE, NL etc.)

Noise values in calculation:

All noise values are mean values (Lwa) (Normal)

Pure tones:

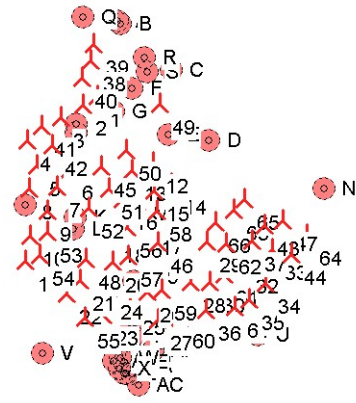
Pure and Impulse tone penalty are added to WTG source noise

Height above ground level, when no value in NSA object:

1.5 m Allow override of model height with height from NSA object

Deviation from "official" noise demands. Negative is more restrictive, positive is less restrictive.:

0.0 dB(A)



Scale 1:200,000
New WTG Noise sensitive area

WTGs

UTM NAD83 Zone: 14				WTG type			Noise data										
East	North	Z	Row data/Description	Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Creator	Name	Wind speed [m/s]	Status	Hub height [m]	Lwa,ref [dB(A)]	Pure tones	Octave data
UTM NAD83 Zone: 14			[m]														
1	354,684.90	5,307,345.60	624.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
2	354,317.45	5,307,106.32	642.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
3	353,722.96	5,306,779.95	651.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
4	352,817.18	5,306,183.44	654.7	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
5	353,069.42	5,305,498.97	660.2	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
6	353,954.72	5,305,406.67	644.9	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
7	353,624.15	5,304,958.49	656.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
8	352,865.53	5,304,888.50	653.3	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
9	353,357.51	5,304,316.72	655.7	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
10	352,900.35	5,303,634.39	656.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
11	352,780.38	5,302,971.62	658.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
12	356,156.06	5,305,596.04	634.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
13	355,618.51	5,305,385.20	640.8	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
14	356,642.05	5,305,015.13	634.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
15	356,196.77	5,304,854.09	642.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
16	355,352.86	5,304,613.58	648.9	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
17	356,028.45	5,303,951.33	644.9	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
18	355,052.31	5,303,745.36	652.3	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
19	355,911.51	5,303,196.30	654.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
20	355,083.30	5,302,949.79	658.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
21	354,222.64	5,302,470.88	648.5	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
22	353,880.16	5,302,117.68	652.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
23	354,845.27	5,301,562.12	628.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
24	354,964.81	5,302,233.41	659.9	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
25	355,551.10	5,301,846.75	658.8	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
26	356,007.28	5,302,154.02	654.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
27	356,292.35	5,301,421.86	655.6	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
28	357,169.95	5,302,410.18	644.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
29	357,592.26	5,303,490.34	632.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
30	357,669.32	5,302,412.86	646.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
31	358,049.42	5,302,623.53	649.5	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
32	358,568.17	5,302,932.69	643.4	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
33	359,334.06	5,303,282.30	628.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
34	359,155.93	5,303,405.91	638.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
35	358,729.16	5,301,972.85	638.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
36	357,582.13	5,301,673.51	642.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
37	358,805.35	5,303,512.73	628.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
38	354,503.62	5,308,282.26	606.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
39	354,583.85	5,308,718.69	595.2	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
40	354,278.58	5,307,835.27	622.7	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
41	353,217.36	5,306,549.18	663.3	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
42	353,477.02	5,306,042.92	650.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
43	359,128.80	5,303,916.93	616.1	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
44	359,846.75	5,303,158.30	618.3	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
45	354,785.53	5,305,478.69	621.6	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
46	356,307.54	5,303,477.12	636.9	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
47	359,614.17	5,304,042.60	600.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
48	354,387.00	5,303,038.03	644.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
49	356,350.68	5,307,133.73	596.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2,000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0</		

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12/1/2011 6:34 PM/2.7.473

DECIBEL - Main Result

Calculation: G 90 on 78m

...continued from previous page

UTM NAD83 Zone: 14				WTG type				Noise data									
East	North	Z	Row data/Description	Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Creator	Name	Wind speed [m/s]	Status	Hub height [m]	LwA,ref [dB(A)]	Pure tones	Octave data
UTM NAD83 Zone: 14			[m]														
51	354,993.26	5,304,891.83	634.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2.000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
52	354,446.88	5,304,383.74	634.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2.000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
53	353,354.94	5,303,744.33	654.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2.000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
54	353,156.97	5,303,125.82	649.7	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2.000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
55	354,356.64	5,301,473.64	644.5	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2.000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
56	355,470.76	5,303,863.43	652.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2.000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
57	355,516.48	5,303,115.24	656.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2.000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
58	356,270.80	5,304,317.44	640.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2.000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
59	356,404.56	5,302,223.42	647.1	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2.000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
60	356,890.59	5,301,473.85	640.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2.000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
61	358,333.55	5,301,769.19	637.6	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2.000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
62	358,100.22	5,303,431.13	634.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2.000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
63	358,303.12	5,304,341.26	609.6	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2.000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
64	360,239.00	5,303,663.03	597.4	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2.000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
65	358,583.00	5,304,623.03	598.0	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2.000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
66	357,825.38	5,304,014.60	619.7	GAMESA G90/2000 2000 90.0	Yes	GAMESA	G90/2000-2.000	2,000	90.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)

*Notice: One or more noise data for this WTG is generic or input by user

Calculation Results

Sound Level

Noise sensitive area			UTM NAD83 Zone: 14			Demands			Sound Level		Demands fulfilled ?	
No.	Name		East	North	Z	Imission height	Noise	Distance	From WTGs	Noise	Distance	All
					[m]	[m]	[dB(A)]	[m]	[dB(A)]			
A	Noise sensitive point: (68)		355,226.56	5,309,341.84	581.9	1.5	45.0	403	36.2	Yes	Yes	Yes
B	Noise sensitive point: User defined (69)		355,287.94	5,309,266.99	582.0	1.5	45.0	403	36.3	Yes	Yes	Yes
C	Noise sensitive point: User defined (70)		356,648.32	5,308,030.30	585.5	1.5	45.0	403	36.0	Yes	Yes	Yes
D	Noise sensitive point: User defined (71)		357,647.07	5,306,178.79	589.5	1.5	45.0	403	36.9	Yes	Yes	Yes
E	Noise sensitive point: User defined (72)		356,582.26	5,306,316.20	589.0	1.5	45.0	403	40.2	Yes	Yes	Yes
F	Noise sensitive point: User defined (73)		355,604.62	5,307,543.20	594.0	1.5	45.0	403	39.5	Yes	Yes	Yes
G	Noise sensitive point: User defined (74)		355,125.24	5,306,945.26	605.4	1.5	45.0	403	41.9	Yes	Yes	Yes
H	Noise sensitive point: User defined (75)		354,119.43	5,306,611.07	642.1	1.5	45.0	403	44.7	Yes	Yes	Yes
I	Noise sensitive point: User defined (76)		354,133.28	5,306,374.14	643.1	1.5	45.0	403	43.5	Yes	Yes	Yes
J	Noise sensitive point: User defined (77)		352,764.76	5,304,473.13	650.7	1.5	45.0	403	44.3	Yes	Yes	Yes
K	Noise sensitive point: User defined (78)		354,097.00	5,304,133.60	636.9	1.5	45.0	403	44.8	Yes	Yes	Yes
L	Noise sensitive point: User defined (79)		354,038.59	5,303,820.97	637.3	1.5	45.0	403	43.8	Yes	Yes	Yes
M	Noise sensitive point: User defined (80)		355,699.34	5,304,240.17	649.3	1.5	45.0	403	47.1	No	Yes	No
N	Noise sensitive point: User defined (81)		360,718.72	5,304,906.48	571.1	1.5	45.0	403	35.3	Yes	Yes	Yes
O	Noise sensitive point: User defined (82)		355,661.11	5,302,442.59	652.5	1.5	45.0	403	45.9	No	Yes	No
P	Noise sensitive point: User defined (83)		355,605.19	5,301,326.78	654.0	1.5	45.0	403	43.4	Yes	Yes	Yes
Q	Noise sensitive point: User defined (84)		354,310.34	5,309,443.01	586.0	1.5	45.0	403	37.1	Yes	Yes	Yes
R	Noise sensitive point: User defined (85)		355,940.03	5,308,365.11	585.0	1.5	45.0	403	36.2	Yes	Yes	Yes
S	Noise sensitive point: User defined (86)		356,023.22	5,307,975.58	588.1	1.5	45.0	403	37.4	Yes	Yes	Yes
T	Noise sensitive point: User defined (87)		355,634.43	5,300,982.43	647.3	1.5	45.0	403	40.9	Yes	Yes	Yes
U	Noise sensitive point: User defined (88)		358,960.54	5,301,029.11	616.0	1.5	45.0	403	38.4	Yes	Yes	Yes
V	Noise sensitive point: User defined (89)		353,242.76	5,300,542.21	637.2	1.5	45.0	403	34.8	Yes	Yes	Yes
W	Noise sensitive point: User defined (90)		355,305.26	5,300,407.57	639.6	1.5	45.0	403	37.4	Yes	Yes	Yes
X	Noise sensitive point: User defined (91)		355,287.22	5,300,129.87	634.7	1.5	45.0	403	36.0	Yes	Yes	Yes
Y	Noise sensitive point: User defined (92)		355,400.97	5,300,004.36	632.0	1.5	45.0	403	35.5	Yes	Yes	Yes
Z	Noise sensitive point: User defined (93)		355,446.47	5,300,001.22	632.0	1.5	45.0	403	35.5	Yes	Yes	Yes
AA	Noise sensitive point: User defined (94)		355,618.26	5,299,995.73	632.6	1.5	45.0	403	35.5	Yes	Yes	Yes
AB	Noise sensitive point: User defined (95)		355,727.81	5,300,487.35	637.9	1.5	45.0	403	37.9	Yes	Yes	Yes
AC	Noise sensitive point: User defined (96)		355,797.03	5,299,702.92	629.5	1.5	45.0	403	34.4	Yes	Yes	Yes
AD	Noise sensitive point: User defined (97)		355,109.73	5,300,327.99	640.6	1.5	45.0	403	36.9	Yes	Yes	Yes
AE	Noise sensitive point: User defined (98)		355,413.02	5,300,293.92	635.7	1.5	45.0	403	36.8	Yes	Yes	Yes
AF	Noise sensitive point: User defined (99)		356,159.63	5,300,614.61	639.4	1.5	45.0	403	39.2	Yes	Yes	Yes

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DECIBEL - Main Result

Calculation: G 90 on 78m

Distances (m)

WTG	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	2068	2014	2079	3184	2159	941	595	927	1117	3455	3265	3583	3267	6508	4999	6089	2131	1617	1479	6434	7628	6955
2	2413	2369	2507	3456	2399	1359	824	533	755	3057	2981	3297	3182	6769	4853	5921	2337	2054	1914	6264	7648	6652
3	2971	2938	3181	3970	2897	2031	1412	431	577	2498	2673	2976	3218	7242	4751	5769	2727	2725	2592	6105	7778	6256
4	3972	3951	4253	4830	3767	3101	2431	1371	1330	1711	2417	2660	3476	8004	4699	5600	3585	3809	3673	5915	8019	5657
5	4407	4373	4384	4628	3607	3257	2514	1529	1378	1070	1709	1938	2916	7672	4007	4882	4135	4056	3855	5194	7395	4960
6	4136	4084	3760	3772	2781	2700	1933	1216	984	1512	1281	1588	2099	6782	3420	4401	4052	3563	3298	4732	6650	4916
7	4667	4619	4311	4204	3255	3256	2490	1725	1504	987	951	1211	2196	7095	3237	4137	4537	4119	3855	4455	6627	4433
8	5041	5004	4917	4953	3982	3814	3056	2131	1953	427	1444	1586	2907	7853	3715	4494	4778	4641	4416	4788	7214	4363
9	5361	5313	4962	4676	3794	3932	3168	2418	2199	613	762	842	2343	7385	2970	3741	5214	4802	4527	4038	6496	3776
10	6163	6118	5777	5386	4555	4753	3989	3217	3004	850	1297	1153	2864	7921	3007	3555	5977	5623	5348	3809	6596	3111
11	6824	6776	6368	5828	5064	5374	4614	3878	3662	1502	1756	1518	3183	8171	2929	3269	6650	6251	5963	3479	6478	2473
12	3859	3772	2484	1601	837	2024	1698	2276	2167	3572	2526	2763	1431	4614	3192	4305	4267	2777	2383	4643	5359	5833
13	3976	3896	2838	2178	1340	2158	1636	1936	1784	2996	1970	2223	1148	5123	2943	4058	4263	2997	2622	4403	5490	5394
14	4552	4462	3015	1538	1302	2733	2455	2985	2853	3915	2693	2864	1220	4078	2753	3831	5004	3423	3024	4157	4611	5618
15	4591	4506	3208	1964	1512	2754	2350	2721	2563	3453	2220	2393	790	4522	2470	3577	4962	3520	3126	3912	4719	5227
16	4730	4654	3654	2777	2100	2940	2343	2348	2142	2592	1344	1535	509	5374	2193	3296	4941	3797	3428	3642	5086	4586
17	5450	5367	4126	2753	2429	3617	3127	3274	3076	3305	1940	1994	438	4787	1553	2658	5754	4415	4024	2995	4140	4403
18	5599	5527	4573	3557	2992	3838	3201	3014	2785	2401	1031	1017	815	5784	1438	2481	5746	4704	4340	2824	4759	3679
19	6184	6103	4890	3451	3191	4358	3831	3856	3642	3396	2042	1974	1065	5102	794	1894	6449	5169	4781	2231	3741	3764
20	6394	6321	5316	4123	3685	4623	3996	3786	3554	2774	1541	1360	1430	5965	769	1705	6539	5483	5113	2043	4327	3031
21	6944	6879	6066	5047	4512	5257	4565	4141	3904	2477	1667	1363	2305	6938	1439	1795	6973	6139	5792	2051	4952	2163
22	7349	7287	6529	5539	4993	5693	4986	4500	4264	2606	2028	1711	2795	7385	1810	1898	7338	6578	6238	2090	5196	1700
23	7789	7718	6715	5400	5061	6029	5390	5101	4864	3578	2678	2399	2811	6759	1200	796	7899	6891	6521	979	4150	1900
24	7113	7041	6036	4771	4392	5348	4715	4459	4223	3140	2089	1838	2137	6345	727	1110	7239	6209	5839	1419	4173	2414
25	7502	7425	6280	4812	4587	5697	5116	4975	4744	3829	2710	2487	2398	6006	606	523	7697	6530	6147	868	3506	2651
26	7230	7149	5911	4346	4202	5404	4872	4840	4617	3987	2751	2580	2109	5457	451	920	7484	6211	5822	1229	3160	3200
27	7991	7909	6618	4946	4903	6160	5645	5626	5402	4664	3489	3292	2880	5633	1200	694	8262	6952	6559	791	2697	3174
28	7199	7110	5644	3799	3950	5366	4975	5192	4993	4864	3523	3434	2348	4339	1509	1903	7592	6081	5682	2097	2261	4349
29	6312	6219	4637	2689	3001	4514	4245	4669	4503	4927	3554	3569	2036	3432	2197	2938	6797	5147	4752	3182	2816	5254
30	7347	7256	5709	3766	4052	5530	5198	5498	5310	5320	3965	3894	2687	3939	2008	2332	7791	6198	5801	2487	1893	4806
31	7287	7195	5585	3578	3973	5494	5218	5599	5422	5599	4231	4186	2852	3512	2395	2767	7777	6117	5723	2920	1836	5238
32	7228	7133	5447	3374	3923	5481	5287	5772	5614	6004	4630	4616	3153	2919	2948	3370	7779	6035	5649	3523	1944	5837
33	7320	7224	5455	3352	4096	5663	5580	6187	6050	6676	5306	5323	3759	2134	3768	4211	7949	6112	5744	4356	2284	6679
34	7972	7876	6158	4063	4681	6245	6071	6561	6401	6717	5346	5309	3913	2949	3495	3711	8544	6772	6390	3798	1391	6200
35	8159	8065	6405	4343	4845	6387	6141	6539	6363	6467	5111	5042	3784	3545	3104	3190	8679	6974	6584	3249	972	5670
36	8022	7932	6425	4506	4749	6194	5816	6031	5830	5572	4266	4143	3183	4504	2069	2007	8430	6890	6492	2067	1522	4484
37	6840	6744	5006	2907	3578	5147	5032	5618	5479	6116	4749	4777	3190	2367	3321	3875	7441	5635	5259	4057	2488	6306
38	1283	1259	2159	3782	2861	1326	1474	1715	1944	4187	4169	4485	4215	7073	5953	7042	1177	1439	1550	7387	8513	7842
39	895	892	2176	3979	3125	1557	1854	2158	2387	4619	4611	4928	4615	7223	6368	7462	774	1402	1620	7807	8848	8286
40	1780	1752	2378	3754	2759	1358	1228	1235	1468	3687	3706	4021	3866	7075	5567	6642	1608	1744	1750	6986	8261	7366
41	3440	3417	3737	4445	3373	2586	1949	904	932	2125	2571	2849	3390	7679	4779	5742	3093	3273	3148	6069	7966	6007
42	3734	3698	3743	4172	3117	2603	1879	858	735	1724	2007	2292	2862	7330	4211	5174	3501	3385	3197	5501	7430	5506
43	6683	6586	4803	2704	3499	5057	5020	5688	5567	6388	5036	5091	3445	1873	3768	4373	7332	5473	5111	4563	2893	6785
44	7719	7622	5828	3737	4542	6101	6053	6688	6556	7203	5832	5846	4286	1954	4246	4620	8376	6509	6150	4741	2306	7103
45	3888	3821	3159	2946	1982	2221	1505	1314	1108	2257	1511	1818	1539	5961	3160	4232	3993	3109	2787	4576	6102	5172
46	5964	5879	4566	3016	2852	4126	3664	3822	3622	3680	2306	2295	976	4637	1220	2262	6291	4902	4507	2584	3610	4243
47	6880	6783	4970	2904	3790	5323	5346	6065	5956	6863	5518	5580	3920	1402	4265	4842	7569	5673	5326	5020	3084	7270
48	6359	6294	5481	4527	3945	4667	3976	3583	3346	2166	1133	857	1780	6602	1406	2101	6405	5549	5202	2404	4995	2746
49	2478	2383	945	1610	850	851	1240	2292	2344	4465	3752	4040	2966	4903	4742	5855	3082	1298	903	6193	6639	7287
50	3428	3350	2419	2200	1187	1628	1078	1510	1404	3062	2250	2538	1698	5353	3485	4597	3705	2490	2129	4942	6014	5819
51	4456	4385	3548	2949	2134	2721	2058	1929	1714	2267	1174	1435	961	5725	2539	3617	4602	3600	3251	3962	5537	4689
52	5019	4955	4260	3669	2880	3365	2650	2251	2015	1684	430	695	1261	6294	2290	3269	5061	4252	3923	3603	5624	4026
53	5902	5851	5405	4934	4127	4415	3658	2967	2743	938	838	688	2396	7455	2648	3303	5778	5295	5002	3581	6229	3204
54	6552	6500	6020	5430	4681	5050	4297	3616	3392	1403	1378	1123	2776	7769	2596	3038	6422	5933	5633	3276	6171	2585
55	7916	7849	6946	5742	5330	6197	5525	5143	4906	3396	2673	2369	3075	7229	1625	1257	7970	7071	6712	1369	4625	1452
56	5484																					

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DECIBEL - Main Result

Calculation: G 90 on 78m

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WTG	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
58	5132	5046	3732	2315	2023	3294	2867	3145	2966	3509	2182	2287	577	4487	1971	3064	5488	4061	3667	3395	4248	4840
59	7215	7132	5812	4146	4097	5380	4892	4947	4732	4279	2996	2855	2136	5080	775	1201	7517	6159	5765	1461	2821	3581
60	8042	7956	6561	4765	4852	6204	5749	5837	5623	5101	3857	3694	3012	5142	1565	1294	8376	6957	6559	1349	2117	3765
61	8185	8093	6484	4463	4873	6386	6090	6419	6233	6191	4852	4760	3612	3941	2756	2764	8665	7017	6622	2811	970	5237
62	6572	6478	4823	2785	3260	4810	4604	5095	4939	5436	4064	4080	2534	3006	2632	3264	7107	5386	4997	3475	2551	5652
63	5871	5775	4043	1951	2619	4187	4108	4760	4639	5540	4211	4296	2606	2481	3253	4045	6478	4666	4290	4290	3377	6328
64	7575	7478	5654	3612	4518	6044	6076	6793	6681	7518	6160	6202	4576	1333	4738	5189	8280	6371	6031	5328	2928	7661
65	5791	5694	3918	1816	2621	4171	4165	4886	4782	5820	4513	4615	2909	2154	3646	4442	6441	4581	4218	4685	3614	6721
66	5927	5833	4185	2172	2616	4169	3985	4525	4382	5081	3730	3792	2138	3028	2675	3486	6467	4741	4352	3741	3194	5750

WTG	W	X	Y	Z	AA	AB	AC	AD	AE	AF
1	6966	7241	7376	7384	7409	6937	7723	7030	7089	6891
2	6771	7044	7184	7194	7229	6768	7550	6824	6900	6748
3	6566	6832	6980	6994	7044	6604	7375	6599	6703	6629
4	6289	6538	6698	6718	6792	6397	7133	6288	6436	6495
5	5561	5809	5969	5990	6065	5673	6406	5559	5708	5780
6	5178	5442	5592	5607	5661	5229	5994	5208	5317	5275
7	4851	5107	5263	5282	5348	4941	5687	4863	4996	5030
8	5102	5339	5503	5527	5614	5250	5957	5083	5254	5396
9	4368	4610	4772	4795	4877	4504	5219	4357	4518	4643
10	4024	4240	4408	4437	4542	4231	4883	3977	4180	4443
11	3599	3789	3959	3991	4112	3855	4448	3523	3755	4120
12	5258	5535	5642	5640	5626	5127	5904	5371	5354	4981
13	4987	5266	5385	5387	5389	4899	5685	5083	5095	4801
14	4798	5070	5162	5154	5123	4619	5379	4931	4879	4427
15	4535	4811	4915	4911	4893	4392	5167	4655	4627	4240
16	4206	4484	4609	4613	4625	4143	4931	4292	4320	4080
17	3617	3893	3997	3993	3977	3477	4255	3738	3709	3339
18	3347	3623	3757	3765	3792	3327	4110	3418	3470	3321
19	2854	3129	3233	3229	3214	2715	3495	2978	2945	2594
20	2552	2827	2963	2971	3002	2545	3324	2622	2676	2571
21	2330	2572	2734	2756	2842	2490	3184	2319	2481	2683
22	2226	2435	2604	2633	2743	2464	3083	2171	2382	2730
23	1243	1499	1654	1673	1747	1391	2089	1262	1389	1620
24	1857	2128	2271	2284	2331	1905	2664	1911	1991	2012
25	1460	1737	1848	1848	1852	1371	2158	1582	1559	1374
26	1882	2148	2234	2225	2193	1690	2460	2035	1953	1547
27	1415	1637	1674	1653	1577	1092	1789	1611	1430	818
28	2736	2957	2986	2962	2870	2404	3035	2929	2751	2060
29	3838	4075	4118	4096	4014	3535	4191	4020	3869	3213
30	3100	3299	3309	3280	3170	2734	3294	3301	3095	2348
31	3527	3721	3725	3695	3580	3155	3688	3730	3518	2758
32	4126	4315	4313	4282	4163	3748	4256	4330	4113	3343
33	4949	5130	5120	5087	4961	4563	5032	5155	4930	4147
34	4338	4489	4457	4421	4281	3928	4311	4549	4298	3491
35	3765	3904	3867	3829	3686	3349	3708	3976	3717	2906
36	2605	2766	2747	2712	2583	2201	2659	2815	2571	1773
37	4679	4881	4889	4859	4746	4316	4854	4879	4676	3924
38	7915	8190	8326	8335	8361	7890	8676	7977	8040	7844
39	8342	8618	8753	8760	8784	8310	9097	8407	8465	8256
40	7498	7771	7911	7921	7953	7489	8273	7553	7626	7462
41	6487	6745	6899	6917	6979	6561	7316	6503	6629	6624
42	5924	6184	6338	6355	6415	5994	6751	5944	6066	6055
43	5190	5394	5404	5375	5263	4830	5372	5388	5190	4441
44	5310	5474	5451	5416	5280	4909	5324	5518	5279	4479
45	5098	5372	5509	5517	5546	5080	5864	5161	5223	5054
46	3229	3499	3589	3581	3549	3045	3809	3369	3307	2866

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DECIBEL - Main Result**Calculation:** G 90 on 78m

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WTG	W	X	Y	Z	AA	AB	AC	AD	AE	AF
47	5637	5834	5836	5805	5687	5267	5780	5839	5630	4867
48	2786	3044	3199	3216	3282	2882	3621	2805	2930	3003
49	6807	7084	7192	7190	7175	6676	7451	6918	6904	6522
50	5516	5794	5917	5920	5928	5441	6228	5605	5628	5352
51	4495	4771	4904	4912	4936	4465	5251	4565	4617	4433
52	4068	4336	4482	4495	4542	4102	4872	4110	4202	4140
53	3865	4099	4263	4288	4379	4030	4722	3841	4018	4203
54	3465	3676	3844	3874	3982	3684	4323	3412	3621	3914
55	1427	1635	1803	1832	1943	1689	2283	1371	1584	1997
56	3460	3738	3860	3862	3871	3386	4173	3554	3570	3321
57	2716	2994	3113	3115	3121	2636	3424	2817	2823	2582
58	4027	4302	4400	4394	4371	3868	4639	4155	4114	3705
59	2123	2373	2435	2420	2362	1863	2593	2295	2169	1627
60	1911	2092	2092	2063	1950	1525	2081	2118	1891	1128
61	3320	3459	3423	3385	3243	2904	3272	3531	3272	2461
62	4117	4337	4362	4337	4238	3781	4382	4310	4131	3420
63	4946	5180	5218	5196	5108	4635	5272	5129	4973	4299
64	5911	6083	6066	6031	5899	5517	5951	6118	5886	5093
65	5340	5572	5609	5586	5496	5026	5654	5524	5366	4684
66	4400	4640	4686	4665	4585	4104	4765	4579	4434	3786

Project:
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Calculated:
12/1/2011 6:42 PM/2.7.473

DECIBEL - Main Result

Calculation: G 97 on 78m

Noise calculation model:

ISO 9613-2 General

Wind speed:

8.0 m/s

Ground attenuation:

General, Ground factor: 0.5

Meteorological coefficient, C0:

0.0 dB

Type of demand in calculation:

1: WTG noise is compared to demand (DK, DE, SE, NL etc.)

Noise values in calculation:

All noise values are mean values (Lwa) (Normal)

Pure tones:

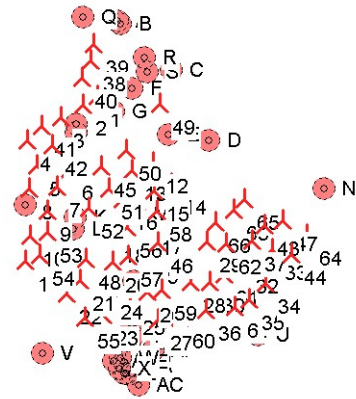
Pure and Impulse tone penalty are added to WTG source noise

Height above ground level, when no value in NSA object:

1.5 m Allow override of model height with height from NSA object

Deviation from "official" noise demands. Negative is more restrictive, positive is less restrictive.:

0.0 dB(A)



Scale 1:200,000
New WTG Noise sensitive area

WTGs

UTM NAD83 Zone: 14				WTG type			Noise data											
East	North	Z	Row data/Description	Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Creator	Name	Wind speed [m/s]	Status	Hub height [m]	LwA,ref [dB(A)]	Pure tones	Octave data	
UTM NAD83 Zone: 14			[m]															
1	354,684.90	5,307,345.60	624.0	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
2	354,317.45	5,307,106.32	642.0	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
3	353,722.96	5,306,779.95	651.0	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
4	352,817.18	5,306,183.44	654.7	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
5	353,069.42	5,305,498.97	660.2	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
6	353,954.72	5,305,406.67	644.9	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
7	353,624.15	5,304,958.49	656.0	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
8	352,865.53	5,304,888.50	653.3	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
9	353,357.51	5,304,316.72	655.7	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
10	352,900.35	5,303,634.39	656.0	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
11	352,780.38	5,302,971.62	658.0	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
12	356,156.06	5,305,596.04	634.0	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
13	355,618.51	5,305,385.20	640.8	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
14	356,642.05	5,305,015.13	634.0	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
15	356,196.77	5,304,854.09	642.0	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
16	355,352.86	5,304,613.58	648.9	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
17	356,028.45	5,303,951.33	644.9	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
18	355,062.31	5,303,745.36	652.3	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
19	355,911.51	5,303,196.30	654.0	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
20	355,083.30	5,302,949.79	658.0	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
21	354,222.64	5,302,470.88	648.5	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
22	353,880.16	5,302,117.68	652.0	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
23	354,845.27	5,301,562.12	628.0	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
24	354,964.81	5,302,233.41	659.9	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
25	355,551.10	5,301,846.75	658.8	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
26	356,007.28	5,302,154.02	654.0	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
27	356,292.35	5,301,421.86	655.6	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
28	357,169.95	5,302,410.18	644.0	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
29	357,592.26	5,303,490.34	632.0	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
30	357,669.32	5,302,412.86	646.0	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
31	358,049.42	5,302,623.53	649.5	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
32	358,568.17	5,302,932.69	643.4	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
33	359,334.06	5,303,282.30	628.0	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
34	359,155.93	5,302,405.91	638.0	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
35	358,729.16	5,301,972.85	638.0	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
36	357,582.13	5,301,673.51	642.0	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
37	358,805.35	5,303,512.73	628.0	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
38	354,503.62	5,308,282.26	606.0	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
39	354,583.85	5,308,718.69	595.2	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
40	354,278.58	5,307,835.27	622.7	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
41	353,217.36	5,306,549.18	663.3	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
42	353,477.02	5,306,042.92	650.0	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
43	359,128.80	5,303,916.93	616.1	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
44	359,846.75	5,303,158.30	618.3	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
45	354,785.53	5,305,478.69	621.6	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
46	356,307.54	5,303,477.12	636.9	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
47	359,614.17	5,304,042.60	600.0	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
48	354,387.00	5,303,038.03	644.0	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
49	356,350.68	5,307,133.73	596.0	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
50	355,462.34	5,305,921.48	626.0	GAMESA G97 2000 97.0	IOI	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER						

Project:
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12/1/2011 6:42 PM/2.7.473

DECIBEL - Main Result

Calculation: G 97 on 78m

...continued from previous page

UTM NAD83 Zone: 14				WTG type			Noise data											
East	North	Z	Row data/Description	Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Creator	Name	Wind speed [m/s]	Status	Hub height [m]	LwA_ref [dB(A)]	Pure tones	Octave data	
UTM NAD83 Zone: 14			[m]															
51	354,993.26	5,304,891.83	634.0	GAMESA G97 2000 97.0	IO!	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
52	354,446.88	5,304,383.74	634.0	GAMESA G97 2000 97.0	IO!	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
53	353,354.94	5,303,744.33	654.0	GAMESA G97 2000 97.0	IO!	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
54	353,156.97	5,303,125.82	649.7	GAMESA G97 2000 97.0	IO!	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
55	354,356.64	5,301,473.64	644.5	GAMESA G97 2000 97.0	IO!	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
56	355,470.76	5,303,863.43	652.0	GAMESA G97 2000 97.0	IO!	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
57	355,516.48	5,303,115.24	656.0	GAMESA G97 2000 97.0	IO!	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
58	356,270.80	5,304,317.44	640.0	GAMESA G97 2000 97.0	IO!	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
59	356,404.56	5,302,223.42	647.1	GAMESA G97 2000 97.0	IO!	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
60	356,890.59	5,301,473.85	640.0	GAMESA G97 2000 97.0	IO!	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
61	358,333.55	5,301,769.19	637.6	GAMESA G97 2000 97.0	IO!	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
62	358,100.22	5,303,431.13	634.0	GAMESA G97 2000 97.0	IO!	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
63	358,303.12	5,304,341.26	609.6	GAMESA G97 2000 97.0	IO!	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
64	360,239.00	5,303,663.03	597.4	GAMESA G97 2000 97.0	IO!	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
65	358,583.00	5,304,623.03	598.0	GAMESA G97 2000 97.0	IO!	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)
66	357,825.38	5,304,014.60	619.7	GAMESA G97 2000 97.0	IO!	hu...Yes	GAMESA	G97-2,000	2,000	97.0	78.0	USER	Runtime input	8.0	User value	78.0	105.6	0 dB Generic *)

*Notice: One or more noise data for this WTG is generic or input by user

Calculation Results

Sound Level

Noise sensitive area		UTM NAD83 Zone: 14			Demands			Sound Level		Demands fulfilled ?		
No.	Name	East	North	Z	Imission height	Noise	Distance	From WTGs	Noise	Distance	All	
					[m]	[dB(A)]	[m]	[dB(A)]				
A	Noise sensitive point: (68)	355,226.56	5,309,341.84	581.9	1.5	45.0	403	36.2	Yes	Yes	Yes	
B	Noise sensitive point: User defined (69)	355,287.94	5,309,266.99	582.0	1.5	45.0	403	36.3	Yes	Yes	Yes	
C	Noise sensitive point: User defined (70)	356,648.32	5,308,030.30	585.5	1.5	45.0	403	36.0	Yes	Yes	Yes	
D	Noise sensitive point: User defined (71)	357,647.07	5,306,178.79	589.5	1.5	45.0	403	36.9	Yes	Yes	Yes	
E	Noise sensitive point: User defined (72)	356,582.26	5,306,316.20	589.0	1.5	45.0	403	40.2	Yes	Yes	Yes	
F	Noise sensitive point: User defined (73)	355,604.62	5,307,543.20	594.0	1.5	45.0	403	39.5	Yes	Yes	Yes	
G	Noise sensitive point: User defined (74)	355,125.24	5,306,945.26	605.4	1.5	45.0	403	41.9	Yes	Yes	Yes	
H	Noise sensitive point: User defined (75)	354,119.43	5,306,611.07	642.1	1.5	45.0	403	44.7	Yes	Yes	Yes	
I	Noise sensitive point: User defined (76)	354,133.28	5,306,374.14	643.1	1.5	45.0	403	43.5	Yes	Yes	Yes	
J	Noise sensitive point: User defined (77)	352,764.76	5,304,473.13	650.7	1.5	45.0	403	44.3	Yes	Yes	Yes	
K	Noise sensitive point: User defined (78)	354,097.00	5,304,133.60	636.9	1.5	45.0	403	44.8	Yes	Yes	Yes	
L	Noise sensitive point: User defined (79)	354,038.59	5,303,820.97	637.3	1.5	45.0	403	43.8	Yes	Yes	Yes	
M	Noise sensitive point: User defined (80)	355,699.34	5,304,240.17	649.3	1.5	45.0	403	47.1	No	Yes	No	
N	Noise sensitive point: User defined (81)	360,718.72	5,304,906.48	571.1	1.5	45.0	403	35.3	Yes	Yes	Yes	
O	Noise sensitive point: User defined (82)	355,661.11	5,302,442.59	652.5	1.5	45.0	403	45.9	No	Yes	No	
P	Noise sensitive point: User defined (83)	355,605.19	5,301,326.78	654.0	1.5	45.0	403	43.4	Yes	Yes	Yes	
Q	Noise sensitive point: User defined (84)	354,310.34	5,309,443.01	586.0	1.5	45.0	403	37.1	Yes	Yes	Yes	
R	Noise sensitive point: User defined (85)	355,940.03	5,308,365.11	585.0	1.5	45.0	403	36.2	Yes	Yes	Yes	
S	Noise sensitive point: User defined (86)	356,023.22	5,307,975.58	588.1	1.5	45.0	403	37.4	Yes	Yes	Yes	
T	Noise sensitive point: User defined (87)	355,634.43	5,300,982.43	647.3	1.5	45.0	403	40.9	Yes	Yes	Yes	
U	Noise sensitive point: User defined (88)	358,960.54	5,301,029.11	616.0	1.5	45.0	403	38.4	Yes	Yes	Yes	
V	Noise sensitive point: User defined (89)	353,242.76	5,300,542.21	637.2	1.5	45.0	403	34.8	Yes	Yes	Yes	
W	Noise sensitive point: User defined (90)	355,305.26	5,300,407.57	639.6	1.5	45.0	403	37.4	Yes	Yes	Yes	
X	Noise sensitive point: User defined (91)	355,287.22	5,300,129.87	634.7	1.5	45.0	403	36.0	Yes	Yes	Yes	
Y	Noise sensitive point: User defined (92)	355,400.97	5,300,004.36	632.0	1.5	45.0	403	35.5	Yes	Yes	Yes	
Z	Noise sensitive point: User defined (93)	355,446.47	5,300,001.22	632.0	1.5	45.0	403	35.5	Yes	Yes	Yes	
AA	Noise sensitive point: User defined (94)	355,618.26	5,299,995.73	632.6	1.5	45.0	403	35.5	Yes	Yes	Yes	
AB	Noise sensitive point: User defined (95)	355,727.81	5,300,487.35	637.9	1.5	45.0	403	37.9	Yes	Yes	Yes	
AC	Noise sensitive point: User defined (96)	355,797.03	5,299,702.92	629.5	1.5	45.0	403	34.4	Yes	Yes	Yes	
AD	Noise sensitive point: User defined (97)	355,109.73	5,300,327.99	640.6	1.5	45.0	403	36.9	Yes	Yes	Yes	
AE	Noise sensitive point: User defined (98)	355,413.02	5,300,293.92	635.7	1.5	45.0	403	36.8	Yes	Yes	Yes	
AF	Noise sensitive point: User defined (99)	356,159.63	5,300,614.61	639.4	1.5	45.0	403	39.2	Yes	Yes	Yes	

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421 SW 6th Ave., Suite 1000

US-PORTLAND, OR 97204

6027705189

Scott Zeimetz / scott.zeimetz@elpower.com

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DECIBEL - Main Result

Calculation: G 97 on 78m

Distances (m)

WTG	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	2068	2014	2079	3184	2159	941	595	927	1117	3455	3265	3583	3267	6508	4999	6089	2131	1617	1479	6434	7628	6955
2	2413	2369	2507	3456	2399	1359	824	533	755	3057	2981	3297	3182	6769	4853	5921	2337	2054	1914	6264	7648	6652
3	2971	2938	3181	3970	2897	2031	1412	431	577	2498	2673	2976	3218	7242	4751	5769	2727	2725	2592	6105	7778	6256
4	3972	3951	4253	4830	3767	3101	2431	1371	1330	1711	2417	2660	3476	8004	4699	5600	3585	3809	3673	5915	8019	5657
5	4407	4373	4384	4628	3607	3257	2514	1529	1378	1070	1709	1938	2916	7672	4007	4882	4135	4056	3855	5194	7395	4960
6	4136	4084	3760	3772	2781	2700	1933	1216	984	1512	1281	1588	2099	6782	3420	4401	4052	3563	3298	4732	6650	4916
7	4667	4619	4311	4204	3255	3256	2490	1725	1504	987	951	1211	2196	7095	3237	4137	4537	4119	3855	4455	6627	4433
8	5041	5004	4917	4953	3982	3814	3056	2131	1953	427	1444	1586	2907	7853	3715	4494	4778	4641	4416	4788	7214	4363
9	5361	5313	4962	4676	3794	3932	3168	2418	2199	613	762	842	2343	7385	2970	3741	5214	4802	4527	4038	6496	3776
10	6163	6118	5777	5386	4555	4753	3989	3217	3004	850	1297	1153	2864	7921	3007	3555	5977	5623	5348	3809	6596	3111
11	6824	6776	6368	5828	5064	5374	4614	3878	3662	1502	1756	1518	3183	8171	2929	3269	6650	6251	5963	3479	6478	2473
12	3859	3772	2484	1601	837	2024	1698	2276	2167	3572	2526	2763	1431	4614	3192	4305	4267	2777	2383	4643	5359	5833
13	3976	3896	2838	2178	1340	2158	1636	1936	1784	2996	1970	2223	1148	5123	2943	4058	4263	2997	2622	4403	5490	5394
14	4552	4462	3015	1538	1302	2733	2455	2985	2853	3915	2693	2864	1220	4078	2753	3831	5004	3423	3024	4157	4611	5618
15	4591	4506	3208	1964	1512	2754	2350	2721	2563	3453	2220	2393	790	4522	2470	3577	4962	3520	3126	3912	4719	5227
16	4730	4654	3654	2777	2100	2940	2343	2348	2142	2592	1344	1535	509	5374	2193	3296	4941	3797	3428	3642	5086	4586
17	5450	5367	4126	2753	2429	3617	3127	3274	3076	3305	1940	1994	438	4787	1553	2658	5754	4415	4024	2995	4140	4403
18	5599	5527	4573	3557	2992	3838	3201	3014	2785	2401	1031	1017	815	5784	1438	2481	5746	4704	4340	2824	4759	3679
19	6184	6103	4890	3451	3191	4358	3831	3856	3642	3396	2042	1974	1065	5102	794	1894	6449	5169	4781	2231	3741	3764
20	6394	6321	5316	4123	3685	4623	3996	3786	3554	2774	1541	1360	1430	5965	769	1705	6539	5483	5113	2043	4327	3031
21	6944	6879	6066	5047	4512	5257	4565	4141	3904	2477	1667	1363	2305	6938	1439	1795	6973	6139	5792	2051	4952	2163
22	7349	7287	6529	5539	4993	5693	4986	4500	4264	2606	2028	1711	2795	7385	1810	1898	7338	6578	6238	2090	5196	1700
23	7789	7718	6715	5400	5061	6029	5390	5101	4864	3578	2678	2399	2811	6759	1200	796	7899	6891	6521	979	4150	1900
24	7113	7041	6036	4771	4392	5348	4715	4459	4223	3140	2089	1838	2137	6345	727	1110	7239	6209	5839	1419	4173	2414
25	7502	7425	6280	4812	4587	5697	5116	4975	4744	3829	2710	2487	2398	6006	606	523	7697	6530	6147	868	3506	2651
26	7230	7149	5911	4346	4202	5404	4872	4840	4617	3987	2751	2580	2109	5457	451	920	7484	6211	5822	1229	3160	3200
27	7991	7909	6618	4946	4903	6160	5645	5626	5402	4664	3489	3292	2880	5633	1200	694	8262	6952	6559	791	2697	3174
28	7199	7110	5644	3799	3950	5366	4975	5192	4993	4864	3523	3434	2348	4339	1509	1903	7592	6081	5682	2097	2261	4349
29	6312	6219	4637	2689	3001	4514	4245	4669	4503	4927	3554	3569	2036	3432	2197	2938	6797	5147	4752	3182	2816	5254
30	7347	7256	5709	3766	4052	5530	5198	5498	5310	5320	3965	3894	2687	3939	2008	2332	7791	6198	5801	2487	1893	4806
31	7287	7195	5585	3578	3973	5494	5218	5599	5422	5599	4231	4186	2852	3512	2395	2767	7777	6117	5723	2920	1836	5238
32	7228	7133	5447	3374	3923	5481	5287	5772	5614	6004	4630	4616	3153	2919	2948	3370	7779	6035	5649	3523	1944	5837
33	7320	7224	5455	3352	4096	5663	5580	6187	6050	6676	5306	5323	3759	2134	3768	4211	7949	6112	5744	4356	2284	6679
34	7972	7876	6158	4063	4681	6245	6071	6561	6401	6717	5346	5309	3913	2949	3495	3711	8544	6772	6390	3798	1391	6200
35	8159	8065	6405	4343	4845	6387	6141	6539	6363	6467	5111	5042	3784	3545	3104	3190	8679	6974	6584	3249	972	5670
36	8022	7932	6425	4506	4749	6194	5816	6031	5830	5572	4266	4143	3183	4504	2069	2007	8430	6890	6492	2067	1522	4484
37	6840	6744	5006	2907	3578	5147	5032	5618	5479	6116	4749	4777	3190	2367	3321	3875	7441	5635	5259	4057	2488	6306
38	1283	1259	2159	3782	2861	1326	1474	1715	1944	4187	4169	4485	4215	7073	5953	7042	1177	1439	1550	7387	8513	7842
39	895	892	2176	3979	3125	1557	1854	2158	2387	4619	4611	4928	4615	7223	6368	7462	774	1402	1620	7807	8848	8286
40	1780	1752	2378	3754	2759	1358	1228	1235	1468	3687	3706	4021	3866	7075	5567	6642	1608	1744	1750	6986	8261	7366
41	3440	3417	3737	4445	3373	2586	1949	904	932	2125	2571	2849	3390	7679	4779	5742	3093	3273	3148	6069	7966	6007
42	3734	3698	3743	4172	3117	2603	1879	858	735	1724	2007	2292	2862	7330	4211	5174	3501	3385	3197	5501	7430	5506
43	6683	6586	4803	2704	3499	5057	5020	5688	5567	6388	5036	5091	3445	1873	3768	4373	7332	5473	5111	4563	2893	6785
44	7719	7622	5828	3737	4542	6101	6053	6688	6556	7203	5832	5846	4286	1954	4246	4620	8376	6509	6150	4741	2306	7103
45	3888	3821	3159	2946	1982	2221	1505	1314	1108	2257	1511	1818	1539	5961	3160	4232	3993	3109	2787	4576	6102	5172
46	5964	5879	4566	3016	2852	4126	3664	3822	3622	3680	2306	2295	976	4637	1220	2262	6291	4902	4507	2584	3610	4243
47	6880	6783	4970	2904	3790	5323	5346	6065	5956	6863	5518	5580	3920	1402	4265	4842	7569	5673	5326	5020	3084	7270
48	6359	6294	5481	4527	3945	4667	3976	3583	3346	2166	1133	857	1780	6602	1406	2101	6405	5549	5202	2404	4995	2746
49	2478	2383	945	1610	850	851	1240	2292	2344	4465	3752	4040	2966	4903	4742	5855	3082	1298	903	6193	6639	7287
50	3428	3350	2419	2200	1187	1628	1078	1510	1404	3062	2250	2538	1698	5353	3485	4597	3705	2490	2129	4942	6014	5819
51	4456	4385	3548	2949	2134	2721	2058	1929	1714	2267	1174	1435	961	5725	2539	3617	4602	3600	3251	3962	5537	4689
52	5019	4955	4260	3669	2880	3365	2650	2251	2015	1684	430	695	1261	6294	2290	3269	5061	4252	3923	3603	5624	4026
53	5902	5851	5405	4934	4127	4415	3658	2967	2743	938	838	688	2396	7455	2648	3303	5778	5295	5002	3581	6229	3204
54	6552	6500	6020	5430	4681	5050	4297	3616	3392	1403	1378	1123	2776	7769	2596	3038	6422	5933	5633	3276	6171	2585
55	7916	7849	6946	5742	5330	6197	5525	5143	4906	3396	2673	2369	3075	7229	1625	1257	7970	7071</				

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Scott Zeimetz / scott.zeimetz@elpower.com
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DECIBEL - Main Result

Calculation: G 97 on 78m

...continued from previous page

WTG	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
58	5132	5046	3732	2315	2023	3294	2867	3145	2966	3509	2182	2287	577	4487	1971	3064	5488	4061	3667	3395	4248	4840
59	7215	7132	5812	4146	4097	5380	4892	4947	4732	4279	2996	2855	2136	5080	775	1201	7517	6159	5765	1461	2821	3581
60	8042	7956	6561	4765	4852	6204	5749	5837	5623	5101	3857	3694	3012	5142	1565	1294	8376	6957	6559	1349	2117	3765
61	8185	8093	6484	4463	4873	6386	6090	6419	6233	6191	4852	4760	3612	3941	2756	2764	8665	7017	6622	2811	970	5237
62	6572	6478	4823	2785	3260	4810	4604	5095	4939	5436	4064	4080	2534	3006	2632	3264	7107	5386	4997	3475	2551	5652
63	5871	5775	4043	1951	2619	4187	4108	4760	4639	5540	4211	4296	2606	2481	3253	4045	6478	4666	4290	4290	3377	6328
64	7575	7478	5654	3612	4518	6044	6076	6793	6681	7518	6160	6202	4576	1333	4738	5189	8280	6371	6031	5328	2928	7661
65	5791	5694	3918	1816	2621	4171	4165	4886	4782	5820	4513	4615	2909	2154	3646	4442	6441	4581	4218	4685	3614	6721
66	5927	5833	4185	2172	2616	4169	3985	4525	4382	5081	3730	3792	2138	3028	2675	3486	6467	4741	4352	3741	3194	5750

WTG	W	X	Y	Z	AA	AB	AC	AD	AE	AF
1	6966	7241	7376	7384	7409	6937	7723	7030	7089	6891
2	6771	7044	7184	7194	7229	6768	7550	6824	6900	6748
3	6566	6832	6980	6994	7044	6604	7375	6599	6703	6629
4	6289	6538	6698	6718	6792	6397	7133	6288	6436	6495
5	5561	5809	5969	5990	6065	5673	6406	5559	5708	5780
6	5178	5442	5592	5607	5661	5229	5994	5208	5317	5275
7	4851	5107	5263	5282	5348	4941	5687	4863	4996	5030
8	5102	5339	5503	5527	5614	5250	5957	5083	5254	5396
9	4368	4610	4772	4795	4877	4504	5219	4357	4518	4643
10	4024	4240	4408	4437	4542	4231	4883	3977	4180	4443
11	3599	3789	3959	3991	4112	3855	4448	3523	3755	4120
12	5258	5535	5642	5640	5626	5127	5904	5371	5354	4981
13	4987	5266	5385	5387	5389	4899	5685	5083	5095	4801
14	4798	5070	5162	5154	5123	4619	5379	4931	4879	4427
15	4535	4811	4915	4911	4893	4392	5167	4655	4627	4240
16	4206	4484	4609	4613	4625	4143	4931	4292	4320	4080
17	3617	3893	3997	3993	3977	3477	4255	3738	3709	3339
18	3347	3623	3757	3765	3792	3327	4110	3418	3470	3321
19	2854	3129	3233	3229	3214	2715	3495	2978	2945	2594
20	2552	2827	2963	2971	3002	2545	3324	2622	2676	2571
21	2330	2572	2734	2756	2842	2490	3184	2319	2481	2683
22	2226	2435	2604	2633	2743	2464	3083	2171	2382	2730
23	1243	1499	1654	1673	1747	1391	2089	1262	1389	1620
24	1857	2128	2271	2284	2331	1905	2664	1911	1991	2012
25	1460	1737	1848	1848	1852	1371	2158	1582	1559	1374
26	1882	2148	2234	2225	2193	1690	2460	2035	1953	1547
27	1415	1637	1674	1653	1577	1092	1789	1611	1430	818
28	2736	2957	2986	2962	2870	2404	3035	2929	2751	2060
29	3838	4075	4118	4096	4014	3535	4191	4020	3869	3213
30	3100	3299	3309	3280	3170	2734	3294	3301	3095	2348
31	3527	3721	3725	3695	3580	3155	3688	3730	3518	2758
32	4126	4315	4313	4282	4163	3748	4256	4330	4113	3343
33	4949	5130	5120	5087	4961	4563	5032	5155	4930	4147
34	4338	4489	4457	4421	4281	3928	4311	4549	4298	3491
35	3765	3904	3867	3829	3686	3349	3708	3976	3717	2906
36	2605	2766	2747	2712	2583	2201	2659	2815	2571	1773
37	4679	4881	4889	4859	4746	4316	4854	4879	4676	3924
38	7915	8190	8326	8335	8361	7890	8676	7977	8040	7844
39	8342	8618	8753	8760	8784	8310	9097	8407	8465	8256
40	7498	7771	7911	7921	7953	7489	8273	7553	7626	7462
41	6487	6745	6899	6917	6979	6561	7316	6503	6629	6624
42	5924	6184	6338	6355	6415	5994	6751	5944	6066	6055
43	5190	5394	5404	5375	5263	4830	5372	5388	5190	4441
44	5310	5474	5451	5416	5280	4909	5324	5518	5279	4479
45	5098	5372	5509	5517	5546	5080	5864	5161	5223	5054
46	3229	3499	3589	3581	3549	3045	3809	3369	3307	2866

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Project:

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421 SW 6th Ave., Suite 1000

US-PORTLAND, OR 97204

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DECIBEL - Main Result**Calculation:** G 97 on 78m

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WTG	W	X	Y	Z	AA	AB	AC	AD	AE	AF
47	5637	5834	5836	5805	5687	5267	5780	5839	5630	4867
48	2786	3044	3199	3216	3282	2882	3621	2805	2930	3003
49	6807	7084	7192	7190	7175	6676	7451	6918	6904	6522
50	5516	5794	5917	5920	5928	5441	6228	5605	5628	5352
51	4495	4771	4904	4912	4936	4465	5251	4565	4617	4433
52	4068	4336	4482	4495	4542	4102	4872	4110	4202	4140
53	3865	4099	4263	4288	4379	4030	4722	3841	4018	4203
54	3465	3676	3844	3874	3982	3684	4323	3412	3621	3914
55	1427	1635	1803	1832	1943	1689	2283	1371	1584	1997
56	3460	3738	3860	3862	3871	3386	4173	3554	3570	3321
57	2716	2994	3113	3115	3121	2636	3424	2817	2823	2582
58	4027	4302	4400	4394	4371	3868	4639	4155	4114	3705
59	2123	2373	2435	2420	2362	1863	2593	2295	2169	1627
60	1911	2092	2092	2063	1950	1525	2081	2118	1891	1128
61	3320	3459	3423	3385	3243	2904	3272	3531	3272	2461
62	4117	4337	4362	4337	4238	3781	4382	4310	4131	3420
63	4946	5180	5218	5196	5108	4635	5272	5129	4973	4299
64	5911	6083	6066	6031	5899	5517	5951	6118	5886	5093
65	5340	5572	5609	5586	5496	5026	5654	5524	5366	4684
66	4400	4640	4686	4665	4585	4104	4765	4579	4434	3786