

**STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL**

**Petition of BNE Energy Inc. for a
Declaratory Ruling for the Location,
Construction and Operation of a 4.8 MW
Wind Renewable Generating Project on
Winsted-Norfolk Road in Colebrook,
Connecticut ("Wind Colebrook North")**

Petition No. 984

April 28, 2011

**THIRD SUPPLEMENTAL PRE-FILED TESTIMONY OF NOISE CONTROL
ENGINEERING, INC., BY MICHAEL BAHTIARIAN, INCE Bd. Cert.**

Q63. Would you like to supplement the Pre-filed Testimony of Noise Control Engineering, Inc., (NCE) dated March 15, 2011?

A63. Yes.

Q64. Have you revised the calculations previously submitted as Exhibit 6 to the Pre-filed Testimony of Noise Control Engineering, Inc., and modeled compliance with Connecticut's noise regulations for worst-case conditions (nighttime using a wind speed of 9 m/s) to arrive at a sound level at the property line nearest to each of the turbines involved in the Wind Colebrook North petition?

A64. Yes, I have. My revised calculations are attached as Exhibit 8.

Q65. What prompted this revision?

A65. The petitioner, BNE Energy Inc., filed the Pre-Filed Testimony of Curtis Jones on March 24, 2011 describing the relocation of Turbine 1 at Wind Colebrook North.

Q66. To what extent did you revise the noise calculations?

A66. The data was recalculated using the new location of Turbine 1 (Turbine N1A).

Q67. What were the changes in the distances between the turbines and the property lines?

A67. The distance from the nearest property line (PL) to the Turbine N1A was changed from 231 feet to 230 feet which is an insignificant change. However, the distances from Turbine 2 and Turbine 3 to the nearest PL for Turbine N1A changed significantly. The distance from N2 to PL-N1A changed from 1,568 to 987 feet. The distance from N3 to PL-N1A changed from 1,725 to 858 feet. Also, the distance from N1A to PL-N2 changed from 1,761 to 1,248 feet and the distance from N1A to PL-N3 changed from 1,710 to 899 feet.

Q68. Were any other revisions made?

A68. No. The source sound level (Lw) remained at 106 dB(A) and the absorption coefficient remained at 5 dB/km.

Q69. What were the resulting changes in the property line sound pressure levels?

A69. As shown in Exhibit 8 the sound pressure levels at the property line nearest N1A, N2 and N3 are 54, 52 and 55 dB(A), respectively. This is an increase of 0 to 1 dB from the previous configuration.


Q70. What is the significance of these results?

A70. BNE's reasoning for the revised location of Turbine 1 is unknown to myself. However, the new location does not result in any lower sound at the property line locations. Essentially, the results are nearly the same. Further, the predicted levels are over the residential-to-residential limit of 45 dB(A) which I proposed to be used. More importantly, these levels are even over the industrial-to-residential limit of 51 dB(A) as proposed by BNE.

Q71. Therefore, does this comply with CTDEP A-weighted noise limits?

A71. No.
4/29/2011

Date

 INCE Bd Cert.

Noise Control Engineering, Inc.
By: Michael Bahtarian, INCE Bd. Cert.

CERTIFICATION

I hereby certify that a copy of the foregoing document was delivered by first-class mail and e-mail to the following service list on the 29th day of April, 2011:

Carrie L. Larson
Paul Corey
Jeffery and Mary Stauffer
Thomas D. McKeon
David M. Cusick
Richard T. Roznoy
David R. Lawrence and Jeannie Lemelin
Walter Zima and Brandy L. Grant
Eva Villanova

and sent via e-mail only to:

John R. Morissette
Christopher R. Bernard
Joaquina Borges King


Denise L. Myron

Property Line Evaluation

Hub Height = 328 ft = 100 meters
 Lw = 106 dB(A)
 Abs Coef = 0.005 dB/m = 5 dB/km

Background Levels dB(A)*	PL-N1A	PL-N2	PL-N3	PL-S1	PL-S2	PL-S3
Wind Turbine N1	38.1	38.1	38.1	38.1	38.1	38.1
Wind Turbine N2	38.1	38.1	38.1	38.1	38.1	38.1
Wind Turbine N3	38.1	38.1	38.1	38.1	38.1	38.1
Wind Turbine S1	38.1	38.1	38.1	38.1	38.1	38.1
Wind Turbine S2	38.1	38.1	38.1	38.1	38.1	38.1
Wind Turbine S3	38.1	38.1	38.1	38.1	38.1	38.1

Horizontal Distance to Recv (feet)	PL-N1A	PL-N2	PL-N3	PL-S1	PL-S2	PL-S3
Wind Turbine N1A	230	1,248	899			
Wind Turbine N2	987	401	755			
Wind Turbine N3	858	911	102			
Wind Turbine S1				216	1,498	1,188
Wind Turbine S2				1,511	141	1,496
Wind Turbine S3				1,419	1,253	406

Distance to Rec, R (feet)	PL-N1A	PL-N2	PL-N3	PL-S1	PL-S2	PL-S3
Wind Turbine N1A	401	1,290	957			
Wind Turbine N2	1,040	518	823			
Wind Turbine N3	919	968	343			
Wind Turbine S1				393	1,533	1,232
Wind Turbine S2				1,546	357	1,532
Wind Turbine S3				1,456	1,295	522

Distance to Rec, R (meters)	PL-N1A	PL-N2	PL-N3	PL-S1	PL-S2	PL-S3
Wind Turbine N1A	122	393	292			
Wind Turbine N2	317	158	251			
Wind Turbine N3	280	295	105			
Wind Turbine S1				120	467	376
Wind Turbine S2				471	109	467
Wind Turbine S3				444	395	159

Sound Pressure Level, dB(A)	PL-N1	PL-N2	PL-N3	PL-S1	PL-S2	PL-S3
Wind Turbine N1	53	41	44			
Wind Turbine N2	43	50	46			
Wind Turbine N3	45	44	54			
Wind Turbine S1				53	39	42
Wind Turbine S2				39	54	39
Wind Turbine S3				40	41	50
Total SPL, dB(A)	54	52	55	53	54	51

Previous Total SPL	53	51	55	53	54	51
Difference from Previous N1 Location, dB	0.8	0.2	0.3	0	0	0
Residence -to-Residence Limit, dB(A)	45	45	45	45	45	45
Excess to above limit, dB	9	7	10	8	9	6
Industrial-to-Residence Limit, dB(A)	51	51	51	51	51	51
Excess to above limit, dB	3	1	4	2	3	0

* Background SPL as stated by VHB in report dated November 2011

