



# Addendum A

REPORT NO. 1762-112305-D

REVISION: B

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## UPDATED NOISE MODELING RESULTS BASED ON CURRENT TURBINE LOCATIONS AND REVISED SUBSTATION LOCATION

### MARBLE RIVER WIND ENERGY PROJECT

#### 1.0 INTRODUCTION

Since the original noise assessment for the Marble River Wind Energy Project was prepared in March of 2006 a number of, generally small, changes have been made to the turbine layout. Some turbines have been eliminated, some moved slightly and others added. The substation location has also been moved a short distance to the west of its original location. This addendum to the noise assessment contains updated sound level contour maps of the site based on the current turbine positions and substation location and briefly discusses what has changed in terms of potential noise impacts from the project.

#### 2.0 UPDATED MODEL RESULTS

##### 2.1 SOUND LEVELS DUE TO MARBLE RIVER PROJECT ALONE

As determined in Section 2.7 of the original noise assessment, the mean residual (L90) background sound level during a wind speed of 8 m/s was found to be 40 dBA under leaf-off, wintertime conditions. Consequently, a project-only sound level of **45 dBA** would theoretically result in a 6 dBA *cumulative* increase in ambient sound level – the general threshold for potential disturbance suggested by the NYSDEC noise assessment procedure.

In **Plot 1** (attached) the expected noise emissions from the project while operating at full power (in an 8 m/s wind) are shown for the overall site. The contours are taken out to 45 dBA (indicated in yellow) to illustrate the areas where project sound levels are at or above the threshold of possible disturbance. **Plots 1A and 1B** are enlarged insets showing the participating and non-participating residences on or within the 45 dBA sound contour line.

In general, the changes in turbine locations have not greatly changed the potential noise impact from the project. Of the 22 homes originally identified as being potentially exposed to project sound levels of 45 dBA or more, 18 remain with predicted levels generally similar to those initially projected. The modified site layout now potentially affects 6 new residences that were previously outside the 45 dBA contour; consequently, there are now 24 residences where project noise may be



clearly audible from time to time depending on wind direction, wind speed and prevailing atmospheric conditions.

An updated version of Table 3.5.1 from the original report is given below listing all known residences where the total sound level (background plus project) may intermittently increase by 6 dBA or more.

**Table 2.1.1** *Residences within the Area that could see Project Sound Levels above 45 dBA*

<b>ID Number</b>	<b>Owner/Address/Location</b>	<b>Project Participant</b>	<b>Nominal Predicted Sound Level, dBA</b>
01	Nichols, 52 Nichols Road, Clinton, NY	Yes	46
02	AES-EHN NyWindpower, Route 189, Churubusco, NY	Owned by Project	49
03	Padworski, 6649 Route 11, Clinton, NY	Yes	45
04 (New)	Premo, Gagnier Rd., Churubusco, NY	Yes	46
05	Rego, 228 Route 189, Churubusco, NY	Yes	45
06	<i>Not Used</i>		
07	Buettner, Patnode & Gagnier Roads, Churubusco, NY	Yes	47
08	Buettner, Campbell Road, Churubusco, NY	Yes	47
09	Williams, 7909 Star Road, Ellenburg, NY	No	46
10 (New)	Vaincourt, Star Road, Ellenburg, NY	Yes	45
11	King, 876 Route 189, Clinton, NY	Yes	48
12	LeClair, 238 Liberty Pole Road, Clinton, NY	Yes	48
13 (New)	Filion, Patnode Road, Churubusco, NY	No	46
14 (New)	Miller, Liberty Pole Road, Churubusco, NY	Yes	46
15	Nichols, 6977 Route 11, Clinton, NY	No	47
16	Nichols, 6985 Route 11, Clinton, NY	Yes	47
17	Trombley, 157 Route 189, Clinton, NY	No	47
18	Miller, 206 Route 189, Clinton, NY	Yes	46
19 (New)	Mathews, Route 189, Clinton, NY	Yes	45
20 (New)	Nichols, Route 11, Clinton, NY	Yes	45
21	<i>Not Used</i>		
22	LeClair, 238 Liberty Pole Road, Clinton, NY	Yes	47
23	<i>Not Used</i>		



ID Number	Owner/Address/Location	Project Participant	Nominal Predicted Sound Level, dBA
24	<i>Not Used</i>		
25	Nichols, 6922 Route 11, Clinton, NY	No	47
26	Buettner, 293 Gagnier Road, Clinton, NY	Yes	47
27	Campbell, 327 Gagnier Road, Clinton, NY	Yes	48
28	Campbell, 444 Gagnier Road, Clinton, NY	No	47

At some residences with nominal predicted sound levels in the 45 to 48 dBA range turbine sounds are likely to be audible outside under most conditions but would be imperceptible or barely perceptible indoors with the windows open. Since the noise reduction afforded by any common residence is at least 15 to 20 dB with the windows closed, operational sounds from the Project would be inconsequential, if not completely inaudible, inside any residence in the site area.

The local ordinance limit of 50 dBA will not be exceeded at any residence and therefore the Project will be compliant with the noise provision of the Local Laws.

The change in the location of the substation has had no affect on potential noise impacts.

## 2.2 CUMULATIVE SOUND LEVELS DUE TO BOTH THE MARBLE RIVER AND ADJACENT NOBLE PROJECT

**Plot 2** and insets **2A** and **2B** show the sound contours that may occur if the Noble wind energy project that is currently proposed to the west and south of the Marble River Project is constructed. This plot is based on the latest revised Marble River site plan and illustrates only those residences that were potentially affected by the Marble River Project alone (as determined from Plot 1).

In general, the Noble turbines are separated from those of the Marble River by a substantial gap that makes their noise negligible at the homes within the Marble River project; i.e. in the vast majority of cases there would be no cumulative increase in noise as a result of the Noble project. The one exception to this, however, is in the southern part of the site where the turbines of the two projects are largely intermixed.

Receptors 09 and 10 would each theoretically see an increase of about 2 dBA due to the addition of a number of Noble turbines in their immediate vicinity. The overall predicted sound level from both projects is 48 and 47 dBA, respectively. This increase in overall predicted sound levels at these two locations makes it more likely that sounds associated with both projects will be audible. Nevertheless, the local ordinance limit of 50 dBA will still not be exceeded.