

STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 7508

Petition of Georgia Mountain Community Wind, LLC,)
for a Certificate of Public Good, pursuant to 30 V.S.A.)
Section 248, authorizing the construction and operation)
of a 5-wind turbine electric generation facility, with)
associated electric and interconnection facilities, on)
Georgia Mountain in the Towns of Milton and Georgia,)
Vermont, to be known as the "Georgia Mountain)
Community Wind Project")

Order entered: 10/31/2012

ORDER RE: NOISE MONITORING PLAN

On June 11, 2010, the Public Service Board ("Board") issued a Certificate of Public Good ("CPG") authorizing the construction of a wind generation facility by Georgia Mountain Community Wind, LLC ("GMCW"), subject to certain conditions, including the following conditions related to noise:

(23) GMCW shall construct and operate the Project so that it emits no prominent discrete tones pursuant to American National Standards Institute ("ANSI") standards at the receptor locations; and Project- related sound levels at any existing surrounding residences do not exceed 45 dBA(exterior)(Leq)(1 hr) or 30 dBA (interior bedrooms)(Leq)(1 hr).

(24) In the event noise from operation of the Project exceeds the maximum allowable levels, the Petitioner shall take all remedial steps necessary to bring the sound levels produced by the turbine(s) into compliance with allowable levels, including modification or cessation of turbine(s) operation.

(25) GMCW shall submit, for Board approval, a noise monitoring plan to be implemented during the first full year of operation. The plan shall establish a monitoring program to confirm under a variety of seasonal and climatic conditions compliance with the maximum allowable sound levels described above. Parties will have three weeks, from the date this plan is filed with the Board, to comment on the plan. GMCW cannot commence operations until the plan is approved.

On October 4, 2011, GMCW filed a post-construction noise monitoring plan ("Noise Monitoring Plan"). The Noise Monitoring Plan provides, in relevant part:¹

Methodology:

The goal of the [Noise Monitoring Plan] is to confirm under a variety of seasonal and climatic conditions compliance with the maximum allowable sound levels as described in the Board's Order.

The following methodology and subsequent findings will be reported at the conclusion of the monitoring program.

- a) Monitoring will occur over at least ten days, in each of the summer, winter, spring, and fall seasons during the first full year of operation.
- b) Monitors will be set at each of the three locations that Resource Systems Group collected background data in its 2008 assessment.
- c) At each location monitor equipment will be at least 10 meters from reflective surfaces such as buildings, and
 - a. Sound level meters meeting the necessary requirements of ANSI/IEC Type 1 or Type 2 will be use[sic],
 - b. Microphones will be placed approximately 1.5 meters above ground and fitted with waterproof windscreens, and
 - c. Anemometers will be placed at each location.
- d) Monitors will record at 1-second time intervals over the entire period.
- e) 1/3 octave band Leq will be recorded during each 1-second interval.
- f) Sound level meters will be field calibrated before and after measurements, and calibration drift noted.
- g) Wind speed and wind direction will be recorded for each 10-minute period, as measured at each turbine hub.
- h) Power output at each turbine will be measured at 10-minute intervals, and will be converted to wind speed based on the wind turbine manufacturer's power curve.
- i) GMCW will be shut down for 30 minutes on six occasions during the monitoring period. The shutdowns will be selected during the night and cover a variety of meteorological conditions.
- j) Data contaminated by human activity, winds greater than the wind screen specification, or rain will be removed from the data set.

The receptor locations screened data will be analyzed as follows:

1. The section of the Noise Monitoring Plan titled Purpose reiterates the Board's conditions regarding noise and requiring GMCW to file a noise-monitoring plan.

- a) For nighttime periods, which exceed 45 dBA, background levels during the turbine shut-off times will be subtracted.
- b) If the resulting sound levels exceeds 45 dBA, recordings of the sound and other data will be used to determine whether the wind turbine contributed to the sound level.
- c) If the resulting hourly Leq exceeds 45 dBA, then these periods and levels will be highlighted.
- d) 1/3 octave band data will be evaluated to identify periods with pure tones.

A report will be prepared following the survey period documenting the methodology and illustrating:

- a) Locations of all sound monitors,
- b) Graphs of sound levels at each location before and after screening,
- c) Periods identified as having wind turbine sound levels exceeding 45 dBA outside and/or pure tones, and
- d) Raw data will be retained.

No comments were filed regarding the Noise Monitoring Plan.

GMCW's proposed Noise Monitoring Plan lacks information regarding how interior sound levels will be calculated and how GMCW intends to handle noise complaints and noise violations. GMCW's proposal also lacks detailed information regarding the measurement and subtraction of background noise, data processing, and reporting.² Based on the evident lack of detail, GMCW's proposed Noise Monitoring Plan, filed on October 4, 2011, is denied without prejudice to file a new proposed plan that provides more descriptive detail, in particular with respect to the issues addressed in this Order.

So ORDERED.

2. See e.g., the Final Monitoring Protocol approved in Docket 7628, Order of 4/3/2012, for a commercial wind generation facility.

Dated at Montpelier, Vermont, this 31st day of October, 2012.

<u>s/James Volz</u>	)	
	)	PUBLIC SERVICE
<u>s/David C. Coen</u>	)	
	)	BOARD
	)	
<u>s/John D. Burke</u>	)	OF VERMONT

OFFICE OF THE CLERK

FILED: October 31, 2012

ATTEST: s/Judith C. Whitney
Deputy Clerk of the Board

NOTICE TO READERS: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board (by e-mail, telephone, or in writing) of any apparent errors, in order that any necessary corrections may be made. (E-mail address: psb.clerk@state.vt.us)