

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: 10/11/2013

ORDER RE: SOUND MONITORING

I. Introduction and Background

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 condition 23, which provides as follows:

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).¹

On September 18, 2013, Reggie Johnson and Shirley Phillips ("Johnson/Phillips"), neighbors whose residence is approximately .63 miles northeast of the project site, filed a complaint with the Public Service Board ("Board") alleging that GMCW is violating condition 23 because cooling fans and heat exchangers installed at the base of the turbines produce prominent discrete tones when they are in operation.

On October 2, 2013, the Clerk of the Board issued a memorandum seeking comments regarding the Johnson/Phillips complaint from the Department of Public Service ("Department"), the Agency of Natural Resources ("ANR") and GMCW.

1. See, Docket 7508, CPG dated 6/11/10 at ¶ 23.

On October 9, 2013, the Department and GMCW filed comments in response to the Johnson/Phillips complaint. ANR did not file comments.

The Department, while acknowledging that monitoring of project noise levels has not to date identified the existence of any prominent discrete tones at receptor locations, recommends that the Board open an investigation into the alleged existence of discrete tonal noise being emitted from the cooling fans and audible at the Johnson/Phillips residence.²

GMCW asserts that the Johnson/Phillips complaint is based on sound levels occurring at the project site rather than surrounding receptor locations, and is incorrectly focused on a single noise source at that site. According to GMCW, the sound standard applies to the overall sound levels emitted by the project as a whole and as experienced at nearby residences. Additionally, GMCW provided memoranda from its sound monitoring consultant, RSG, Inc., which report that no prominent discrete tones were identified at monitoring locations in the first three monitoring periods.³

II. Discussion

We have reviewed the Johnson/Phillips complaint as well as the responses filed by the Department and GMCW and have determined that GMCW must take steps during its upcoming and final fall monitoring period⁴ to ensure that the cooling fans are in operation for some meaningful percentage of time when sound monitoring is taking place to determine if prominent discrete tones are both being produced and are audible at receptor locations.

According to GMCW, megawatt-scale turbines require a cooling system to address heat produced during the generation process, thus the need for the exterior cooling fans/heat exchangers at the base of the turbines.⁵ GMCW also notes that the first three sound monitoring periods did not identify any prominent discrete tones at receptor locations and asserts that the

2. Department comments at 3-5.

3. GMCW comments at 2-3 and attachments.

4. According to GMCW, the fall monitoring period will commence in late October or early/mid November. GMCW comments at attachments.

5. GMCW comments at 1.

project is therefore in compliance with condition 23 of the CPG.⁶ However, while it is critical of the methodology used by Johnson/Phillips to conclude that prominent discrete tones were produced by the cooling fans,⁷ GMCW did not dispute the assertion that fans are capable of producing such tones. Rather, GMCW's position is predicated on use of an improper methodology and monitoring location.

Additionally, while GMCW's first three monitoring periods did not identify any prominent discrete tones at receptor locations, there is no indication that the cooling fans were operating at any time during those monitoring periods so it is possible that the results of that monitoring do not reflect the full array of sound that the project is capable of producing. According to GMCW, the fans are needed to cool the turbines during operations but GMCW does not represent that they are on all of the time. The first three monitoring periods took place between February 12 and March 8, 2013, May 29 and June 25, 2013, and August 30 and September 13, 2013.⁸ It is almost certain that the first monitoring period did not capture operations during hot weather when the fans would likely be needed for cooling purposes, and it is not clear based on the information provided that the second and third monitoring periods included days that would have been hot enough to require the use of the cooling fans.

Given the information before us, we hereby order GMCW to take steps during its upcoming and final fall monitoring period to ensure that the cooling fans are in operation for some meaningful percentage of time when sound monitoring is taking place. We understand that this may entail running the cooling fans when they are not actually needed for operations. However, this approach forestalls the need to await warmer weather and direct additional monitoring under climatic conditions that would require operation of the fans. When GMCW files its sound monitoring report after the fall monitoring period, it shall include a description of the steps it took to ensure that cooling fan noise was captured in the monitoring data at a representative spectrum of the fans' potential sound levels, including their maximum sound level,

6. GMCW comments at 2-3.

7. Mr. Johnson and Ms. Phillips consulted with Mr. Richard James, INCE, for analysis of the sounds being produced by the cooling fans.

8. GMCW comments at attachments.

for a meaningful period of time. The report shall include a separate discussion addressing the results of the monitoring while the fans were in operation.

SO ORDERED

Dated at Montpelier, Vermont, this 11th day of October, 2013.

<u>s/James Volz</u>	)	
	)	PUBLIC SERVICE
	)	
<u>s/John D. Burke</u>	)	BOARD
	)	
	)	OF VERMONT
<u>s/Margaret R. Cheney</u>	)	

OFFICE OF THE CLERK

FILED: October 11, 2013

ATTEST: s/Susan M. Hudson
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)