

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: 11/6/2013

ORDER RE: DEPARTMENT MOTION TO ALTER

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 electric generation facility (the "Project") 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 Board alleging, inter alia, 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 9, 2013, the Department of Public Service ("Department") and GMCW each filed comments in response to the Johnson/Phillips complaint.

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

On October 11, 2013, the Board issued an Order re: Sound Monitoring directing 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," and 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" ² The purpose of the October 11, 2013, Order was to ensure that the sound impacts from the operation of the fans were captured during the fall monitoring period to test the Project's compliance with condition 23 of the CPG.

On October 25, 2013, the Department filed a Motion to Alter the October 11 Order, asking the Board to add language that would make clear that all Project components capable of producing discrete tones, including the cooling fans located at the bases of the turbines, be non-operational at times when background sound levels are being assessed as part of the sound-monitoring process. ³

On October 30, 2013, the Clerk of the Board's office issued a memorandum establishing November 4, 2013, as the deadline for responding to the Department's motion.

On November 4, 2013, GMCW responded to the Department's motion stating that it was not opposed to the motion and that it had commenced the fall sound-monitoring period in compliance with the recommendations contained in the Department's motion. ⁴

II. Discussion

In today's Order, we grant the Department's motion, subject to certain modifications discussed below, because of the lack of opposition to the relief requested in that motion. However, even though we are granting the motion we do not believe that GMCW could have reasonably interpreted the approved noise-monitoring protocol, condition 23 of the CPG, or our October 11, 2013, Order to allow the company to include any Project-generated sound levels

2. Docket 7508, Order of 10/11/13 at 3.

3. Department Motion at 2-3.

4. GMCW also responded to a Motion to Alter filed by Reggie Johnson and Shirley Phillips. That matter will be addressed separately from the Department's motion.

within the determination of background sound levels when testing the Project's compliance with condition 23. Additionally, while we do not agree with the Department that any ambiguity exists that would have allowed GMCW to conclude otherwise, we also write today to clarify that our approval of the sound-monitoring protocol was based on the understanding that background sound levels used to determine Project compliance with the applicable noise restrictions were to be free of any Project-generated noise.

The Department is concerned that ambiguity exists in the Project's approved sound-monitoring protocol that could result in sound levels from certain noise-producing elements of the Project, including the cooling fans, being included in the measurement of background sound levels during the fall monitoring period.⁵ Because background sound levels are subtracted from overall sound levels to determine Project-only sound levels, improperly including Project-generated sounds in background sound measurements can result in the Project being found in compliance with condition 23 when it is actually out of compliance. The Department's concern arises from language in the sound-monitoring protocol that requires background sound levels to be measured by shutting down the "wind farm" for specified periods of time during sound monitoring. The Department is concerned that GMCW might interpret the phrase "wind farm" to refer only to the spinning turbine blades, and that other noise-generating Project components would therefore continue to produce noise during these "wind farm" shut-down periods, thus resulting in an artificially high background sound level.⁶

We do not agree that the potential ambiguity described by the Department exists for two reasons.

First, condition 23 of the CPG requires "the Project" to be operated within certain sound parameters. In our June 11, 2010, Order approving GMCW's petition, "the Project" is described

5. It is necessary to determine the background sound level, i.e., the ambient sound level that is normally present in the absence of Project operations, at receptor locations in the Project area so that these background levels can then be subtracted from overall sound levels measured while the Project is operating. This calculation yields the sound levels that are present as a result of the Project itself and allows a determination regarding Project compliance with condition 23.

6. Department Motion at 2-3.

as consisting of a three- to five-turbine wind generation facility.⁷ According to GMCW, the cooling fans are necessary to address heat produced during the generation process and therefore are an integral part of the turbines.⁸ Because, as GMCW asserts, the cooling fans are an integral part of the turbines, which are themselves undoubtedly a part of "the Project," then the noise from the cooling fans must be accounted for in determining the Project's compliance with condition 23. And, in order for the sounds produced by the cooling fans to be accurately accounted for in determining compliance with condition 23, their sound levels must of necessity be excluded from background measurements.

Second, the sound-monitoring protocol requires that the "wind farm" be shut down for specified periods during monitoring to determine background sound levels. The terminology describing this requirement is not limited to specific components of the Project, but rather describes the entire Project using the general term "wind farm." The monitoring protocol does, in other locations, refer to "turbine curtailment" periods and back ground sound levels "obtained when the turbines [are] not operating."⁹ However, as GMCW has explained, the cooling fans are an integral part of the turbines, and therefore when the "turbines" are turned off, the fans, by definition, are also turned off, regardless of the protocol's apparent interchangeable use of the terms "wind farm" and "turbine" in describing background sound measurements.

Lastly, as noted above our approval of the sound-monitoring protocol was predicated on our understanding that all Project components capable of producing sounds at levels sufficient to influence background sound readings at receptor locations would be paused, shutdown or otherwise rendered quiet during periods of background sound measurement. The goal behind the sound-monitoring requirement is to determine whether or not the Project, in its entirety, is producing sounds that are within the acceptable limits established by condition 23. In order to make that determination it is necessary to measure the level of background sound that would exist in the absence of the Project so that the background level can then be subtracted from the

7. Docket 7508, Order of 6/11/10 at 12-13.

8. Letter from Andrew Raubvogel, Esq., to Susan M. Hudson, Clerk of the Board, dated October 9, 2013, at 1.

9. Monitoring protocol at 2.

overall sound level measured during Project operations, thus arriving at the sound solely attributable to the Project.

Including sound produced by any aspect of Project operations or maintenance in the measurement of background sound levels would frustrate the goal behind the sound monitoring requirement by yielding inaccurate calculations of Project-only sound levels and the possibility of a finding that the Project is in compliance with condition 23 when in fact it might not be in compliance. Accordingly, it is our expectation that GMCW will conduct its background sound monitoring during the fall monitoring period, and has conducted its background sound monitoring in each of the prior monitoring periods, in a manner that eliminates sound levels from any Project equipment or activity capable of influencing background sound measurements at receptor locations. GMCW shall file with the Board confirmation that it is and has conducted its sound monitoring consistent with this understanding no later than close of business on November 15, 2013. This confirmation shall include a description of the steps GMCW took to ensure that no project-generated noise, regardless of its source, influenced background sound measurements.

With respect to the specific relief requested by the Department, we are modifying the proposed language and alter our October 11, 2013, Order by adding the following:

GMCW shall ensure that all Project components capable of influencing sound measurements at background sound monitoring locations, including the cooling fans at the base of the turbines, are not operating during the 30-minute wind farm shutdown periods referenced in Section 5 of its Sound Monitoring Protocol during its upcoming and final fall monitoring period. The wind farm shutdown periods shall not begin until the turbine cooling system has brought all components to a safe temperature, allowing the cooling fans to be non-operational for the entirety of the 30 minutes.

We are modifying the Department's proposed language because that language is too narrow to address background sound impacts from all Project infrastructure. Because the Department's proposal only applies to equipment capable of producing discrete tones, the language would allow other non-turbine equipment to potentially impact background sound levels provided it generated sound without discrete tones. Accordingly, we have modified the

Department's proposal to apply to all Project components that are capable of influencing the measurements of background sound, including those capable of producing discrete tones.

SO ORDERED.

Dated at Montpelier, Vermont, this 6th day of November, 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: November 6, 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)