

STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No.7628

Joint Petition of Green Mountain Power et al)
for a certificate of public good, pursuant to)
30 VSA Section 248 to construct 63 MW wind)
electric generation facility and associated)
facilities on Lowell Mountain in Lowell,)
Vermont, and the installation or upgrade of)
approximately 16.9 miles of transmission)
line and associated substations in Lowell,)
Westfield and Jay, Vermont

“SHOW CAUSE “ AND CIVIL PENALTIES PUBLIC SERVICE BOARD HEARING

POSITION OF PARTIES DONALD AND SHIRLEY NELSON

Introduction

Consistent with direction provided by the Public Service Board (“Board”) at the close of its August 8, 2013 hearing in this matter, pro se parties Donald and Shirley Nelson provide this position relative to 1) the adequacy of an evidentiary record showing cause as to why petitioners Green Mountain Power et al (“GMP”) should be sanctioned for violations of the noise standards imposed in Condition 39 of the Board’s Order and Certificate of Public Good (“CPG”) dated May 31, 2011 and, 2) the necessity for imposing civil penalties pursuant to the provisions of 30 VSA Section 30. In addition, parties Nelson herein contend that Condition 40, as stated on page 165 of the Board’s May 31, 2011 Order, in the context of the evidentiary record established in the present violation proceeding, requires the imposition of remedial action to ensure future compliance with the noise standards that were previously imposed for the operation of the wind turbine facilities.

The Evidentiary Record

Condition 39 in the CPG states:

39. The Petitioners shall construct and operate the proposed project so that the turbines emit no prominent discrete tones pursuant to 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).

The evidence submitted in this compliance proceeding clearly proves that the operation of the wind turbine facilities has exceeded the noise limits imposed in Condition 39. This evidence was not refuted by the petitioner or any party to the proceedings.

1. Without Noise Reduction Operations (NRO), pre-construction predictive sound modeling found that the project using the Vestas V112 3.0 MW turbine would exceed the CPG limit of 45 dBA (exterior) (Leq) (1 hr). [*Exh. Pet.- 20 KHK-2 (Supplemental) Page 9*]
2. With NRO implemented, the project is likely to create exceedences at the Nelson property between 5% and 10% of the time during each of at least three seasons in the year – spring, summer and fall. [*Exh. Pet.- 20 KHK-2 (Supplemental) Page 9*]
3. No NRO mode is scheduled for Turbines 6 through 10 [*Fall 2012 Sound Compliance Testing, page 12*], which are the turbines west and northwest of the Nelsons that most directly impact the Nelsons under the most common wind directions.
4. RSG recommends a review of the NRO and general operating procedures “when unusual snow build-up is possible”. [*Winter 2013 Sound Compliance Testing, p. 34*]

5. Mr. Kaliski agrees the 45 dBA(exterior)(Leq)(1 hr) limit is a "red line" not to be exceeded. [*Nelson Cross-examination of Kaliski, August 8, 2013*]
6. GMP admits it was aware that snow build-up on the Vestas V112 blades could impact sound emissions as early as November 3-4, 2012. [*Nelson Cross-examination of Castonguay, August 8, 2013*]
7. GMP admits multiple periods of excessive turbine noise but could only validate snow build-up on the blades for the November 3-4 and March 2, 4 incidents. [*Nelson Cross-examination of Castonguay, August 8, 2013*]. No root cause has been proffered by GMP for the prominent discrete tones identified during fall monitoring.
8. At no time has GMP conducted interior noise monitoring to validate compliance with the 30 dBA (interior bedrooms)(Leq)(1 hr) limit. GMP avers that turbine noise emissions will attenuate by 15 dBA with windows open. The indoor standard must be met regardless of the attenuation characteristics of the existing structure. [*PSB Certificate of Public Good, May 31, 2011 at 99*]
9. Mrs. Nelson has recorded numerous instances since November 2012 where interior noise levels exceeded the limit established in the CPG including periods when monitoring was occurring. [*Nelson prefiled testimony including Appendices A-E, July 26, 2013*]
10. Exceedences of the Order's noise limitations occurred even though not all of the 21 turbine units were in operation during the noise monitoring period and the turbines were operated at only 18% of the proposed and authorized "nameplate" capacity – well below the 35.78% capacity factor promised by GMP. The record contains proof of violations of Condition 39. Therefore, petitioner GMP has failed to show cause why it should not be sanctioned pursuant to 30 VSA Section 30.

Civil Penalties

A person who fails to obey a final order of the Board shall be required to pay a civil penalty after notice and an opportunity for a hearing. [30VSA Section 30(a)(1)] Civil penalties range up to a maximum of \$40,000 per violation and, in the instance of a continuing violation, may entail penalties of up to \$10,000 per day. [30 VSA Section 30(b)] The record in this violation proceeding demonstrates that sound monitoring has documented at least four specific instances when the Condition 39 sound limits were exceeded. Thus, each of the four instances should be considered as a distinct and individual violation. Other exceedences were also acknowledged by GMP but these exceedences occurred outside the monitoring periods.

The provisions of 30 VSA Section 30 (c) specify eight factors which the Board may consider in determining the amount of a fine under Section 30(a)(1). Parties Nelson submit that the following factors of 30 VSA Section 30(c) are pertinent and applicable to the calculation of penalties in this matter:

Factor 1 – The exceedences of the Condition 39 sound level limits have harmed the health of parties Nelson as well as other nearby residents. Parties Nelson have consistently raised their concerns about undue adverse health effects that result from the operation of the turbine units. The Board determined that the potential for adverse noise impacts on nearby residences was a concern and imposed an absolute standard of 45/30 dBA (exterior/interior) (Leq) (1hr) [*PSB Certificate of Public Good, May 31, 2011 at 98*] – a determination with which the parties continue to disagree. GMP supported the noise limits imposed by the PSB. Neither GMP nor any other party has challenged in this proceeding the prefiled representations and the testimony provided at the August 8th hearing by parties Nelson that the operation of the wind turbines above the limits has caused and continues to cause them to suffer health effects in terms of sleep disruption as well as headaches, persistent ringing in the ears, tightness around the head, dizziness, and nausea.

In addition, GMP has failed to validate whether the project is operating in

compliance with the 30 dBA (interior bedrooms)(Leq)(1 hr). GMP's experts rely on the expectation that turbine noise emissions will attenuate by 15 dBA with windows open. The PSB requires that GMP meet Condition 39 of the CPG regardless of the attenuation characteristics of existing structures.

At the very least, the record supports a conclusion that the violations “might” have harmed the public health in light of the overall record in the proceedings for docket 7628. Either way, the first factor in 30 VSA Section 30(c) has been met.

Factor 2 – Petitioner GMP knew – or at the very least had reason to know – that the violations existed. Assuming that the petitioner was diligent in daily, or at least periodic, reviews of the recorded monitoring results, GMP knew that the violations existed. Insofar as the violations were repeated with the continued operation of the turbines, subsequent violations were obviously intentional.

Factor 3 – Petitioner GMP benefited economically during the periods of violations of the Condition 39 limits because it received financial value from the sale of power during such time periods, in addition to the sale of renewable energy credits and production tax credits. According to the prefiled and posthearing testimony of GMP witness Castonguay, the total output value for this same period is increased from \$2,200 to \$6,518 with these additional credits.

Factor 4 – Although the duration of each individual exceedence of the Condition 39 limits documented by GMP expert RSG may not have been lengthy, the cumulative impact of the violations combined must be considered. Furthermore, many other violations were observed and recorded by party Shirley Nelson in her noise diaries at times when expert RSG was not monitoring.

Factor 5 – The deterrent effect of penalties must not be underestimated in this matter. As stated above, the turbines have been in operation at a level that has not yet attained the maximum allowed under the CPG. It is reasonable to assume that, absent substantive penalties for these known violations, the petitioner has little incentive to

ensure strict adherence to Condition 39 going forward especially under weather conditions that are known to result in noise pollution such as wind shear.

Factor 6 – It cannot be disputed that petitioner GMP, and corporate parent Gaz Metro, have very substantial economic resources. If penalties are to have any effect in terms of meaningful sanction of this petitioner, they must be calculated in the context of the petitioner's economic resources.

Factor 7 – Parties Nelson do not have access to petitioner GMP's record of compliance with prior Orders of the Board. Certainly the Board and party DPS have access to such information. Parties Nelson contend that any of GMP's prior violations of any and all Board Orders – even if not specific to the turbines on Lowell Mountain – must be considered because they would demonstrate a disrespectful pattern of corporate behavior toward the regulatory process and affected citizens.

Factor 8 – It is a vast understatement for parties Nelson, as long time residents of the Town of Lowell in the Northeast Kingdom of Vermont, to observe that snow is not an uncommon climatic phenomenon during at least six months of each calendar year on the Lowell Mountains. Despite this characteristic of weather well known to the region's residents petitioner GMP's experts failed to integrate the effects of snow on turbine blades in the design of both its noise studies in obtaining the CPG and in the sound monitoring system which is the subject of this violation proceeding. It is not credible that GMP's expert RSG, who claims to have been involved in the review of at least 50 wind energy projects, including many in the Northeast, can now state that they were unaware of snow-induced blade noise until winter monitoring at the project revealed the problem. The record shows that GMP was aware of this issue as early as November 3-4, 2012 yet took no action. This is a manifestation of corporate malfeasance in the regulatory process.¹ GMP lacks credibility when it asserted that it

¹ Vibration detectors installed on all the blades should shut down operation of the turbines to prevent blade failure which would also prevent ice and snow loads from creating high noise. Operating the turbines with a snow load may violate the warranty agreement with Vestas.

did not anticipate problems from snow on turbine blades given that this is a company that has operated wind turbines for 15 years at its Searsburg, Vermont facility. While parties Nelson argue that GMP's failure to acknowledge the effects of snow laden turbine blades on sound levels is, in effect, a material misrepresentation made to the Board in describing the potential noise impacts of the turbines, at a minimum, the failure of GMP to have considered the effects of snow on a project in Vermont is certainly an aggravating circumstance.

In conclusion, parties Nelson have shown that the violations under consideration in this proceeding have substantive ramifications under all eight factors of 30 VSA Section 30(c) and substantial civil penalties are required. Parties Nelson believe that a minimal financial penalty in this matter should be imposed in the amount of \$6,518 and that a penalty of \$25,000 is both just and reasonable when all eight factors are given appropriate weight.

Remedial Action

Condition 40 on page 165 of the Board's May 31, 2011 Order states:

(2) In the event noise from operation of the proposed project exceeds the maximum allowable levels, the Petitioners 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.

Although Condition 40 was not explicitly included in the scope of the August 8th hearing, the content and purpose of the condition is germane to the present proceeding and its content is squarely applicable to any consideration of violations of sound level limits and measures toward concrete steps – although parties Nelson contend that such steps are unlikely to be successful and the cessation of operation of the turbines is the only appropriate solution. Parties Nelson request that the Board

take administrative notice of Condition 40 and, in the interest of administrative efficiency, give full consideration to the proposal that follows.

The record in the present violation proceeding is clear that modifications must be made to the locations of the recording devices in the vicinity of the Nelson residence and that additional monitoring device locations are also required, including interior monitoring – although the Nelsons would prefer not to host sound monitoring in the future. Furthermore, the record in this matter also supports the design and implementation of a continuous sound monitoring system via automated telemetry as well as attended monitoring during periods when GMP can expect the project to be operating at, or near the threshold limits (with or without NRO). Only with such a system in place can the Board and parties have confidence that ongoing measurements of sound levels to ensure compliance with Condition 39 will be effective and timely. Parties Nelson propose that the Board order petitioner GMP to devise a proposed continuous sound monitoring system by no later than October 4, 2013 and that the proposal then be submitted for the review and comment of the parties prior to final action by the Board. This system should be installed and in operation by no later than December 31, 2013.

Parties Nelson urge the Board to utilize and proceed under the provisions of 30 VSA Sections 20(a)(1) and 21 in requiring the installation and operation of the proposed continuous sound monitoring system via automated telemetry. In other words, parties Nelson propose that an independent third party be retained to install and operate the new system and that all costs be “billed back” to petitioner GMP.

Parties Nelson also request a review of the NRO schedule, conducted by an independent expert, for Turbines 6 through 10 under all operating conditions.

Civil penalties are deposited in the general fund [see 12 VSA 435(b)(12)] and are of no benefit in providing relief from the undue adverse noise impacts suffered by parties Nelson and other neighbors. Parties Nelson again note that the violations now

before the Board resulted from the operation of the turbines at a level far below the maximum authorized in the CPG. It is reasonable and necessary to ensure that a more effective sound monitoring system is in place as soon as possible. Thus, while substantial penalties are justified as argued above, they, in and of themselves, provide no assurance of compliance going forward. Accordingly, the Board should exercise its continuing jurisdiction under Condition 40 in the Order dated May 31, 2011 to require a continuous sound monitoring system via automated telemetry as a remedial action.

Dated this 28th day of August 2013 and respectfully submitted by

A handwritten signature in black ink that reads "Donald Nelson". The script is cursive and fluid.A handwritten signature in black ink that reads "Shirley Nelson". The script is cursive and fluid.

Donald and Shirley Nelson