



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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GOVERNOR

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COMMISSIONER

MEMORANDUM

TO: Board of Environmental Protection
FROM: Mike Mullen, Bureau of Land & Water Quality, Augusta
DATE: May 3, 2012
RE: Final Adoption: Amendments to Chapter 375, Section 10 Control of Noise

Statutory and Regulatory Reference: Chapter 375 Section 10 rules are adopted pursuant to general statutory authority at 38 M.R.S.A. Section 341-H(2). Pursuant to P.L. 2011 Chapter 359, these rules are major substantive.

Procedural History: The Board was properly petitioned in December 2010 to undertake rulemaking to amend Chapter 375 Section 10 Control of Noise to include a new section of standards related specifically to wind power projects. On February 3, 2011 the Board posted to the rule to public hearing but did not set a date for the hearing. A public hearing was scheduled for May 19, 2011 but was postponed. A public hearing was held on July 7, 2011. Prior to the hearing and in evidence submitted at the hearing, the petitioners submitted comments in which they proposed changes to the posted rule. The comment period ended July 18, 2011. The Board deliberated on the rule and the comments received on two different occasions and directed staff to draft an amended rule based on its deliberations.

On August 8, 2011, staff presented a rule for the Board's consideration that differed from the petitioners' proposal in several aspects. Because the rule was determined to be substantially different than the original proposal, the rule was opened for comment again until August 29, 2011. The Board provisionally adopted the proposed rule amendments on September 15, 2011.

Discussion: A detailed discussion and response to comments is contained in the Basis Statement attached. The Legislature held a public hearing on the provisionally adopted rule on February 8, 2012 and those testifying generally supported the rule. The Legislature approved the rule as provisionally adopted in Resolve Chapter 131: no changes were made. The major items of the proposed amendments to Chapter 375(10) are discussed below.

I(2) Sound Level Limits for Routine Operation of Wind Energy Developments: On September 15, 2011, the Board approved a single limit for noise sound levels, based on the Department's past experience that all wind developments are essentially located in a "quiet location", which has been the assumption used by wind developers in all but the Mars Hill project. The petitioners proposed a nighttime limit of 35 dBA and 55 dBC or background plus 10 dBA and 20 dBC. That standard likely cannot be met given the analysis performed by the Board's consultant, EnRad Consulting.

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The petitioners argued that a low frequency limit should be established (dBC) but staff and the Board's consultant continue to believe that at the 42 dBA limit proposed, low frequency noise should not be an issue, especially since measurement of this level occurs at the property line or at least 500 feet from a residence.

I(4) Short Duration Repetitive Sounds (SDRS): The Board approved a slight reduction in the 'valley to peak to valley' measurement of SDRS from 6 dBA to 5 dBA. Also, it approved applying a 5 dBA penalty to an entire 10-minute monitoring interval if the standard is exceeded 5 times within an interval. The petitioners' proposal of defining SDRS as a 3 dBA change in noise levels is too restrictive given natural variations of noise level in nature. While the industry argued the current definition of SDRS should not be changed, a 6 dBA change requirement is too high a threshold and would eliminate many of the SDRS events from consideration. Further, a change in sound of 6dBA would be clearly audible and likely prominent. A change in noise level of 5 dBA is considered a point at which most people experience a noticeable change in sound.

I(5) Compliance with the Sound Level Limits: The Board approved a nighttime noise level limit of 42 dBA. The petitioners presented arguments that the World Health Organization's (WHO) recommended limit of 40 dBA should be applied to wind projects. The WHO limit is based on an annual nighttime average of sound levels at the building façade. Studies of actual sound level measurements from an existing wind project show this standard is being met at the current compliance points, which are not at the building's façade or in the bedroom. A reduction in the proposed noise level limit from 45 to 42 dBA is a perceptible decrease, which will likely result in alignment with the WHO nighttime noise guidelines.

I(7) Submissions: The petitioners' proposed, that pre-development background noise levels be gathered and submitted. However, the Board, for reasons stated above under Section I(2), did not approve a background plus standard and agreed that such information is not necessary to determine compliance so this proposal was not adopted.

The Board approved building into the predictive modeling requirement an uncertainty factor of 0-3 dBA, which is to be applied at the discretion of the Department. While the petitioners argued it should be set at 3 dBA given the 45 to 42 dBA reduction in the noise level requirement, the industry argued there is no guidance as to when or how much of an uncertainty factor will be required. While still retaining the flexibility to apply an appropriate uncertainty factor, the Board approved adding language to provide guidance on when the factor would be applied. In addition, it should be noted that predictive modeling also requires assumptions of worst scenarios such as assuming all turbines are operating at maximum power output.

I(8) Measurement Procedures: The Board approved requiring audio recording during compliance measurements but in a different, more manageable format than that proposed by the petitioners. In addition, the Board determined that continuous monitoring at all times during operation is cost prohibitive and not necessary given the compliance protocol. Continuous monitoring is not required of any other Site Law development.

Department Recommendation: The Department recommends that the Board grant approval for final adoption of the proposed amendments to Chapter 375 Section 10 Control of Noise.

Estimated Time: 15 minutes

