

THE STATE OF NEW HAMPSHIRE BEFORE THE NEW HAMPSHIRE SITE EVALUATION COMMITTEE

DOCKET NO. 2012-01

APPLICATION OF ANTRIM WIND ENERGY, LLC

FOR CERTIFICATE OF SITE AND FACILITY FOR ANTRIM WIND ENERGY, LLC

PROPOSED TO BE LOCATED IN ANTRIM, HILLSBOROUGH COUNTY, NEW HAMPSHIRE

POST-HEARING BRIEF OF THE APPALACHIAN MOUNTAIN CLUB

Dr. Kenneth D. Kimball

January 14, 2013

The Appalachian Mountain Club (AMC) offers the following post hearing comments and proposed Certificate conditions for the Antrim Wind Energy, LLC (AWE) should the NH Site Evaluation Committee (SEC) certify this project. For brevity's sake AMC does not repeat its previous testimony including: Pre-filed direct testimony of Dr. Kenneth Kimball (July 31, 2012), Terms of Agreement between AMC and AWE (July 31, 2012) and Dr. Kimball's testimony during cross-examination. The AMC and AWE Terms of Agreement was submitted by the Applicant as a supplement to its Application and was submitted as AMC -5 Exhibit.

AMC does not intervene in all commercial wind project applications due to staff and resource limitations. AMC primarily focuses on projects with a strong nexus to AMC's mission including those that will impact resources of state to national significance and of high interest to the organization, or which have the potential to establish important policy or permitting precedents including the use of best available technology to minimize or mitigate unavoidable adverse impacts. AMC intervened in this case for the latter reason. This project represents the use of advanced technologies including taller turbines (slightly less than 500 feet above ground level) and larger generators (3 MW) in what was once assumed to be a medium wind environment, a technological trend that is now common in the industry. The increase in equipment size can dramatically increase the visual impact of wind farms, both during the day and at night due to required Federal Aviation Administration (FAA) aircraft safety lighting requirements (when turbines exceed 199 feet in height).

Light pollution is a significant impact on the rural landscape and a quality night sky is an important but diminishing resource in New Hampshire¹ for people who want to stargaze, see the Milky Way, enjoy the constellations, bright planets and comets or meteors. This region of New Hampshire currently has one wind farm (Lempster) with more wind farms likely to be proposed

¹ <http://www.nhsgc.sr.unh.edu/roadtrips/astro.shtml>

in the near future. The visual impact of each wind farm can extend outwards for 20 to 30 miles. At night they can create an extensive blinking ‘red-light district’ imprint on the landscape. As more projects are built in a region, cumulatively the visual impact could become an unreasonable adverse impact as the term is used in the criteria for approval as set forth in NH RSA 162-16:H.IV, though each project independently by itself may not raise to that level.

Radar activated lighting (RAL) control systems are now an available technology that is currently approved for use by the FAA for tall structures other than wind farms to reduce nighttime light pollution. These systems utilize on-site radar to detect approaching aircraft and turn on warning lights when an aircraft is in proximity to the structure. However at all other times warning lights remain off, which can diminish the nighttime visual impact of tower based aircraft warning lighting systems.

The FAA is in the process of reviewing the RAL technology for wind farms. Recently permitted wind farms in other states (e.g. the Deerfield Wind project in Vermont²) are now requiring that once the technology is approved by the FAA, that the technology be installed on the project within a specified time frame. The applicant for the proposed Bowers Mountain project in eastern Maine (currently under review by the Maine Department of Environmental Protection) has also agreed to utilize this technology on their project³.

AMC contends that 1) the technology exists to significantly mitigate the visual impact of nighttime lighting created by the project, 2) there is a high likelihood that the FAA will approve this technology in the near future as compared to the life span of this proposed project, 3) the use of this technology should be a required condition of approval for this project, even to the extent of post-construction retrofitting should the NH SEC certify the project, and 4) the Applicant has agreed to implement this technology.

The ‘Terms of Agreement’ reached between AMC and AWE and later submitted as a supplement by AWE in its Application to the NH SEC requires the Applicant to install and utilize the RAL technology on the project no later than one year after FAA approval. Should the NH SEC certify this project, AMC contends that the certification should require implementation of the Terms of Agreement between AMC and AWE and submitted as a supplement by AWE to its Application before the NH SEC. AMC also contends that RAL technology should be required in all future applications and approved wind farm certifications by the NH SEC to protect the night sky resources of the State of New Hampshire.

2

http://a123.g.akamai.net/7/123/11558/abc123/forestservice.download.akamai.com/11558/www/nepa/9046_FSPL_T2_121589.pdf

3

http://www.maine.gov/dep/ftp/WindPowerProjectFiles/BowersMountain/application/Section_1_ProjectDescription.pdf

The AMC acknowledges that the RAL technology does not address daytime visual or other impacts of concern brought forth by other parties in this proceeding. The 'Terms of Agreement' between AMC and AWE in no way implies that AMC now supports this project, or that other issues raised by other interveners are without merit or in any way are resolved by this agreement. AMC believes that this agreement appropriately establishes that the State of New Hampshire's SEC should require best available technologies to reduce serious project impacts like nighttime light pollution as a certification requirement should it decide to certify this or other projects in the future.

The AMC thanks the NH SEC for the opportunity to present these comments, expresses our appreciation to the staff for their hard work and diligence during the course of this process and for their patience and understanding toward all of the parties in this proceeding.

Respectfully submitted

Dr. Kenneth D. Kimball, Director of Research

Appalachian Mountain Club