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By Electronic and Hand Delivery

Donald E. Murphy, Project Planner
Maine Land Use Regulation Commission
22 State House Station
Augusta, ME 04333

Re: Blue Sky East, LLC
Bull Hill Wind Project - DP 4886

Dear Don:

In accordance with the Fifth Procedural Order, enclosed please find Blue Sky East's rebuttal to public comments filed with the Commission as of May 31, 2011. Most of the comments submitted by the public were addressed by the parties' witnesses during the adjudicatory hearing or in prior filings by Blue Sky East. Many comments are general expressions of opposition to wind power. The following responses are to comments which were repeated by numerous individuals or to comments with clear factual errors.

Applicability of Eastbrook Wind Ordinance, Land Use Ordinances and Comprehensive Plan

A petition has been filed with the Commission requesting that LURC "adhere to" the Eastbrook Comprehensive Plan, Eastbrook's Land Use Ordinances, and the Eastbrook Wind Ordinance. As a threshold matter, communities ordinarily do not have the ability to regulate activities that occur outside their municipal boundaries and, as a result, by their express terms, the Eastbrook ordinances, including both the land use and wind ordinances, apply only to development within the Town of Eastbrook. There is a limited exception to this general principle under the Site Law sound regulations that govern this proceeding, and which allows the review agency to "consider" quantifiable sound limits in an adjacent community. Blue Sky East previously provided an assessment of both the legal applicability of the Eastbrook Wind Ordinance and compliance with its terms and, although summarized below, will not be repeated in its entirety. See March 15, 2011 Geoffrey West Letter ("March 15th Filing").

With regard to noise impacts, LURC must find that the Project will not have an undue adverse effect on existing uses. 12 M.R.S.A. § 685-B(4)(C). The Bull Hill Project is located

entirely within T16 and, therefore, the Commission is required only to "take into consideration" any "quantifiable noise standards" in an adjacent municipality's ordinance. When LURC is considering Eastbrook's quantifiable noise standards, the underlying question is whether it is necessary to apply those standards to ensure no undue adverse effect on existing uses. It is uncontested that the Project's predicted sound levels meet the 45 dBA quiet nighttime limit set forth in the Site Law and will also meet the quantifiable 40 dBA Eastbrook Wind Ordinance nighttime limit at protected locations in the Town of Eastbrook. A figure from Scott Bodwell's Pre-Filed testimony (page 9) showing the differences between the DEP and Eastbrook noise standards is attached hereto as Exhibit "A."

There are only three (3) quantifiable noise standards in the Eastbrook Wind Ordinance:[1]

- Nighttime sound limit of 40 dBA, applied within 660 ft. of a protected location;
- Hourly sound limit of 35 dBA at any location greater than two miles from any turbine; and
- 5 dBA may be added to measured sound levels for purposes of determining compliance if there are certain tonal sounds.

As noted in the March 15th filing and in Scott Bodwell's pre-filed testimony, the modeling shows that the Project will meet the 40 dBA nighttime standard at the Eastbrook dwellings and at all locations on their property, sound will not exceed 35 dBA two miles from any turbine, and the Project is not expected to generate tonal sounds that would trigger application of the tonal penalty. See Bodwell Pre-Filed Testimony, pp. 8-10. Both Kathleen Donahoe (the owner of lot "P-1") and David Boulter testified that their concerns regarding sound impacts were related to their continued use and enjoyment of their property. Donahoe Testimony, Transcript Vol. III, pp. 58-67; Boulter Testimony, Transcript Vol. III, pp. 41-42, 55-56. As noted above, the Project will meet the Eastbrook 40 dBA standard at every location on Ms. Donahoe's and Mr. Boulter's properties. There is no rational reason, therefore, to apply this standard on land not owned by these residents (and upon which no houses exist). The fact that predicted sound levels are in compliance with the 40 dBA limit at protected locations ensures both that the intent of the Eastbrook ordinance, which is to protect residential properties from unreasonable sound impacts will be satisfied, and also that the Project will meet the more general requirement that there be no undue adverse effect on existing uses.

There is one location 660 feet from the property line of P1 where the modeling does not show compliance with the 40 dBA standard set forth in the Eastbrook Wind Ordinance. See

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[1] The DEP regulations define "quantifiable noise standard" as "[a] numerical limit governing noise from developments that has been duly enacted by ordinance by a local municipality. 06-096 CMR ch. 375, § 10(G)(17). The Eastbrook Wind Ordinance contains numeric noise standards for both small and large scale wind energy facilities. See Sections 19.1 (noise standards for Type 1A/1B facilities), 20.1 (Type 2/3 facilities). The Section 20.1 noise standards are those that would apply to the Project if constructed in Eastbrook, and are cited herein. There are no other "numerical limits governing noise" in the Eastbrook Ordinance.

Bodwell Pre-Filed Testimony, p. 10 n. 5.[2] Compliance with the nighttime limit 660 feet beyond the protected locations should not, however, be considered by the Commission. The purpose behind the requirement to consider quantifiable sound limits in adjacent communities is to protect existing uses and, in particular, residents in adjacent towns. The 660-foot provision, however, requires compliance with the nighttime limit at locations beyond the property line where such residences are located and in some instances extends beyond the municipal boundaries. There is no reason for the Commission to apply the Eastbrook 40 dBA limit to locations that extend beyond the property lines of residential parcels in Eastbrook, particularly where, as here, it is not necessary to ensure protection of existing uses in Eastbrook.

Finally, there is no legal basis for requiring Blue Sky East to comply with Eastbrook's Comprehensive Plan or other Land Use Ordinances. The DEP sound regulations provide a limited exception that allows the Commission to consider "quantifiable noise standards," but there is no regulatory or other basis for the Commission to consider more general provisions set forth in an adjacent municipality's comprehensive plan or any other adjacent town ordinance. To do otherwise would allow one town to regulate growth and uses in an adjacent town.

Acadia National Park

Several commenters have urged the Commission to deny a permit for the Project on the basis of alleged visual impacts to resources in Acadia National Park. The Wind Power Act provides that the Commission "shall consider insignificant the effects of portions of the development's generating facilities located more than 8 miles, measured horizontally, from a scenic resource of state or national significance." 34-A M.R.S.A. § 3452(3). The Commission's visual expert, Dr. Palmer noted in his report that with regard to the 8 mile legislative presumption of insignificance,

> This is the beginning distance of the background for the current generation of grid-scale wind turbines, where atmospheric effects and distance result in a simplified image—"texture has disappeared and color has flattened, but large patters of vegetation or rock are still distinguished, and landform ridgelines and horizon lines are the dominant visual characteristics. While turbines may be visible beyond 8 miles, they will be relatively indistinct and it may not be possible to detect the motion of the blades.

Palmer Report at 4 (emphasis added, internal citations omitted). In addition, Mr. DeWan testified that, at distances greater than 3-5 miles, "the effects of distance and atmospheric haze will obliterate the surface textures, detailing, and form of project components." DeWan Pre-Filed Testimony at 6.

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[2] Although the modeling suggests that sound levels at this location will be 41.5 dBA, operation of the Stetson I and Stetson II projects has shown that actual sound levels have been 2-4 dBA below the conservative models used for these projects, including Bull Hill. As a result, as Mr. Bodwell testified, it is likely that the Bull Hill Project will meet that standard the majority of the time at that location 660 feet from P-1.

The Park is more than 20 miles away from the closest turbine. See DeWan Testimony, Transcript Vol. II, p. 65. As a result, the visual impacts to Acadia National Park will be insignificant.

Viability of the Bull Hill Wind Resource

During the evening session on May 16th, one commenter raised questions about the viability of the wind resource in the Project area, submitting a "Maine Wind Sites" map that predicted average wind speeds in the Project area of 5.5-6.0 meters/second ("m/s"). See May 31, 2011 Comments from Gary Kuhn. Statewide wind maps are a limited tool in predicting actual wind speeds as such maps show wind speeds calculated and averaged over large regions that do not take into account more granular topographical details or site-specific data. In contrast, Blue Sky East has collected actual site-specific data and the Project area averages wind speeds of 7.2 m/s. See David Fowler Pre-Filed Testimony p. 6; Transcript Vol. II, pp. 27-28. This actual data classifies this resource as Class II/III, which makes this a commercially viable wind resource.

Energy and Environmental Benefits of Wind Power

Several commenters have questioned the operational viability of wind power projects such as Bull Hill, claiming that these projects do not contribute any significant energy benefits and do not displace fossil fuel generation. Attached at Exhibit "B" is actual annual energy and environmental benefits attributed to operation of the Stetson I and Stetson II projects. As the data shows, for the two year period (2009-2010), these project generated approximately 340,000 megawatt hours of electricity, which:

- Offsets more than 280 million pounds of CO_2
- Provides electricity for more than 47,000 homes
- Replaces the equivalent of 631,000 barrels of oil or 180,000 tons of coal
- Results in the same reduction in CO_2 emissions as removing 24,600 cars from Maine's roadways

Property Values

Several commenters stated concerns regarding the impact of the Bull Hill Project on property values, although no reports or evidence of such adverse impacts were submitted. Studies have been conducted on this issue and have found that there is no evidence that proximity to wind power projects has a measurable adverse impact on property values.

The most extensive and rigorous study to date on the relationship between wind energy projects and property values is a December, 2009 report entitled The Impact of Wind Power Projects on Residential Property Values in the United States: A Multi-Site Hedonic Analysis (the "Berkeley Report"). The study was conducted by a U.S. Department of Energy ("DOE") national laboratory that conducts a wide variety of unclassified scientific research for DOE and is managed by the University of California. The Berkeley Study analyzed nearly 7,500 home sales within 10 miles of 24 wind projects in nine states throughout the country, including the Northeast

states of New York and Pennsylvania. The study provides an in-depth assessment on whether residential property values in the United States have been affected, in a statistically measurable way, by views of and proximity to wind projects. Specifically, the study evaluated the potential for area stigma, scenic vista stigma, and nuisance stigma, and all three potential stigmas were investigated by exploring the potential impact of wind projects on home values based both on distance to and view of the projects from the homes. Berkeley Report at 10. Field visits were made to every house in the study to clearly determine the extent to which there was project visibility and to collect other essential data, and a number of statistical analyses and modeling were undertaken to evaluate the potential impact of wind turbines on residential property values.

The results demonstrated that there was no evidence "that home prices surrounding wind facilities are consistently, measurably, and significantly affected by either the view of wind facilities or the distance of the home to those facilities." Id. at xvii and 75. The Berkeley Report is attached at Exhibit "C."[3]

Health Effects

Finally, similar unsubstantiated claims were made regarding perceived health effects of wind power project operations. This issue has been raised and rejected in several prior permitting proceedings, both at LURC and at the DEP. The peer-reviewed medical and public health literature clearly shows that there is no evidence of any adverse health effects due to the types of noise and vibrations generated by projects such as Bull Hill. See Wind Turbine Neuro-Acoustical Issues, Dora Ann Mills, MD, MPH, Maine CDC/DHHS, June, 2009 at 3 ("MCDC Report," attached at Exhibit "F"). The MCDC Report also considered the potential health effects of low-frequency vibrations and infrasound, concluding that the sound levels associated with projects such as Bull Hill do not pose any health risk. MCDC Report at 4. It is also important to note that the nearest non-participating residence to the Project is approximately 3,882 feet (3/4 of a mile) away from the nearest turbine.

The conclusions of the MCDC are consistent with other peer-reviewed studies on this issue. See Roberts et al., Evaluation of the Scientific Literature on the Health Effects Associated with Wind Turbines and Low Frequency Sound, October 20, 2009; The Potential Health Impact of Wind Turbines, Chief Medical Officer of Health, Ontario, Canada, May, 2010 (attached at Exhibits "G" and "H"). These reports discuss the impact of low-frequency sound, finding that such sounds are caused by existing natural and man-made sources ("e.g., wind, rivers," cars, airplanes), and that under many conditions, low-frequency sound from turbines cannot be distinguished "from environmental background noise from the wind itself." CMOH Report at 6.

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[3] The results of the Berkeley Study are consistent with two other studies of note. The first is a 2006 study that examined the effect of a 20-turbine wind power facility in rural New York State on the value of properties within five miles. See Ben Hoen, Impacts of Windmill Visibility on Property Values in Madison County, New York (April 30, 2006). The Hoen study found that the visibility of wind turbines had no measurable effect on home prices. Id. at 34. The second is a 2003 study that analyzed property values within five miles of 10 different wind energy projects, also concluding that "there is no support for the claim that wind development will harm property values." Sterzinger et al., The Effect of Wind Development on Local Property Values (May 2003) at 9. The Hoen and Sterzinger reports are attached at Exhibits "D" and "E."

Moreover, adverse impacts due to low-frequency sound are seen "at higher decibel levels than produced by wind turbines" and at "pressure sound levels" far above what is created by the current generation of wind turbines. Roberts Report at 7; CMOH Report at 10.

Both reports conclude that no scientific evidence exists showing any link between wind turbine noise and adverse health effects. Roberts Report at 44; CMOH Report at 10. In addition, the Roberts Report concluded that it is not noise from wind turbines, but the concern about impacts from wind turbine noise that may be causing the reported adverse health symptoms:

> Believing without question can lead to positions of unnecessary vulnerability…the rush to accept opinions [regarding adverse health effects of wind turbines] without adequate scientific or medical basis (e.g., objective medical tests) may actually lead to adverse health outcomes originating from the perception of health effects.

Roberts Report at 43 (emphasis added).

Finally, the CMOH Report concluded that reports of adverse impacts due to wind turbine noise may correlate to general objections to wind power projects. Annoyance due to wind turbine noise,

> …was strongly correlated with individual perceptions of wind turbines. Negative attitudes, such as aversion to the visual impact of wind turbines on the landscape, were associated with increased annoyance, while positive attitudes, such as direct economic benefit from wind turbines, were associated with decreased annoyance.

CMOH Report at 6.

In conclusion, there is no scientific evidence showing a correlation between wind turbine noise and adverse health effects, and reported "symptoms" may be caused by false perceptions that adverse health effects exist or due to general objections (visual or otherwise) to these projects.

Thank you for your attention to these comments. Please do not hesitate to contact me with any questions.

Sincerely,

Kelly B. Boden

KBB/mtr
Enclosures

cc: Lynne Williams, Esq. (By e-mail)
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