REVIEW MEMORANDUM

May 10, 2011

To: Fred Todd, Land Use Regulation Commission
From: John Hopeck, Ph.D., Division of Environmental Assessment

Re: Bowers Mountain Wind Project

1) No water supply or wastewater disposal is described for the substation; it is assumed that water supply and wastewater disposal will be required for at least the Operations and Maintenance Building, but that information is not include din the materials received for review, and relevant information should be provided as soon as possible.

2) The blasting plan as submitted does not include the specific performance standards for management of possible adverse effects of ground vibration, air overpressure, flyrock control, record keeping, and other relevant requirements as specified in 38 MRSA §490-Z(14)(L) and38 MRSA §484, sub-§9. At least the following standards should be specifically stated in the plan:

    a) ground vibration at offsite structures may not exceed the limits shown in Figure B-1 of Appendix B, U.S. Bureau of Mines Report of Investigations 8507 (this figure is referred to in the plan, but the plan does not state that it is to be applied as the ground-vibration performance standard);
    b) air overpressure offsite may not exceed the limits provided at Department Rules Chapter 375.10(C)(4)(c) and 38 MRSA §490-Z(14)(H);
    c) flyrock must be controlled so as to remain on the site and may not enter a protected resource unless the Commission has previously approved alteration of that resource in the impacted area;
    d) records of blasts generally consistent with the requirements of 38 MRSA §490-Z(14)(L) must be kept and provided to the Commission if requested (note that the Department of Environmental Protection generally does not consider such records incomplete if the social security number of the blaster is not included).

3) Reconnaissance of the area indicates that there is a relatively continuous zone of frequently manganiferous sulfidic pelite and sandstone at the west end of the site, in the area south of Brown Hill and the west end of Bowers Mountain. However, much of this area in the southern part of the site and in the area of proposed turbine construction is at very high metamorphic grade. These higher grade rocks are not likely to present a significant risk of generating acidic drainage, although local concentrations of reactive minerals may occur (some sulfides were observed in veins even in areas of very high grade) and should be identified for further analysis and not included in fill if encountered during construction. Lower-grade rocks lie within the area of access road construction may be disturbed during road

construction; large exposures of this lithology are found at the present Getchell Brook crossing. Again, the applicant should be prepared to identify potentially reactive rocks and deal with them appropriately if encountered during construction. The belt of metasedimentary and metavolcanic rocks underlying much of the eastern two-thirds of the site is known to contain sulfidic horizons and metal-bearing zones, and some outcrops to the east of Brown Hill were observed to interfere with a magnetic compass to some degree. As noted above, the higher metamorphic grade rocks along the ridges will be less likely to generate acidic drainage, but local concentrations of reactive minerals may occur; these may be comparable to those encountered during construction of the Rollins Mountain project, although the average metamorphic grade in the proposed construction area appears to be higher. No precautionary measures beyond those taken at the Rollins Mountain site and as described in Exhibit 15C of this application are considered necessary at this time.

4) The Spill Prevention, Control, and Countermeasures Plan submitted in Exhibit 7C defines setbacks of 100 feet from refueling areas for certain resources; these setbacks should also apply for fuel storage, overnight vehicle parking, and any vehicle or equipment maintenance. The applicant indicates in the blasting plan that there are no wells known in the area to be impacted by the project; however, setbacks from wells should be defined in the event of new development prior to or during construction, or for incorporation into the operational SPCC plan discussed below. Recommended minimum setbacks would be 100 feet from a known private well, and 200 feet from a public water supply well and 100 feet from a known private intake or spring, and 200 feet from a public water supply intake. All buffer areas should be clearly marked in the field prior to construction, and the markers should be described in the SPCC plan.

5) Prior to operation, the applicant should submit for review and approval a Spill Prevention, Control, and Countermeasures Plan addressing the operation of the project, including description of storage at the operation and maintenance building, including storage for emergency generators, if any, procedures for management of spills during routine operation and maintenance in the right-of-way, and procedures for changing oil and other lubricants in the turbines, including volumes and temporary storage methods for new and used oil.

6) The information submitted does not describe usage of herbicides or other chemicals along the collector lines, substation, and other areas of the project. The applicant should submit for review and approval by the commission a vegetation management plan addressing herbicide use, manual clearing, and other procedures for maintenance of the rights-of-way and other relevant areas of the project. No herbicide may be stored, mixed or loaded within 100 feet of any wetland or surface water, or applied within, or within 25 feet of any surface waters, wetlands with open water at the time of application, significant vernal pool depressions (whether there is standing water or not), rare natural communities and ecosystems as listed by the Maine Natural Areas Program, and habitats supporting threatened

or endangered plant species, or habitat of any species identified as threatened or endangered in the State. Minimum setbacks from water supplies would be as defined in Item 4 for herbicides with low leaching potential; use of herbicides with higher leaching potential would require greater setbacks. All buffer areas must be clearly marked in the field at all times and the applicant should assess the rights-of-way for any new construction, relocated wells, or other features that would require adjustment of buffer locations, prior to regular maintenance applications of herbicide.