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Maine Department of Inland Fisheries and Wildlife response to questions from Sixth Procedural Order In the Matter of Development Permit DP 4886 Blue Sky East, LLC , Bull Hill Wind Project, June 3, 2011

Question to MDIFW:

“1.Does the 50/50 operational curtailment program proposed by the Applicant sufficiently reduce the risk of bird and bat mortality? Why or why not? In what way is the Applicant’s approach different from that proposed by the agency for the same two-year period to study the effects of operational curtailment on bird and bat mortality?”

MDIFW Response:

As expressed in MDIFW’s pre-filed comments and at the hearing, non-migratory populations of cave-dwelling bats remain a very serious concern for the Department. Since the Public Hearing on May 16 and 17, 2011, Maine has confirmed the presence of White Nose Syndrome in bat hibernacula inside the state for the first time. Any additive risk factors, including wind turbine mortality, may place these populations in jeopardy. Published studies, cited in the March 10, 2011 submission by IF&W, show that operational curtailment at low wind speed reduces bat mortality as a result of either collision with a turbine blade or barotrauma from extreme pressure changes near a blade. At the same time, IF&W understands that operational curtailment of the Bull Hill wind facility comes at a financial price for the applicant, so any program of curtailment should be targeted at the time periods when bats are present in the area and active. As described in First Wind’s letter of June 2, 2011, IF&W and the applicant have agreed to pursue a rigorous study of operational curtailment at the Bull Hill facility to determine the dates and conditions in which the practice is likely to substantially and effectively reduce bat mortality. This study is expected to closely follow the methods and pursue the same objectives as the study at the Sheffield wind facility, currently under construction in Vermont. Additional studies at comparable projects at other locations may be coordinated and pooled to improve analysis of statistical significance of study results. At the conclusion of the study(ies) all turbines at the Bull Hill facility should be operated under an agreed upon, LURC-approved operational regime including curtailment as may be determined by the studies. Specific dates and environmental conditions will depend on the study results. In the event that a final study design can not be agreed on, IF&W restates our recommendation that all turbines be curtailed from April 20 to October 15 from 30 minutes before sunset to 30 minutes after sunrise whenever wind speeds are below 5.0 mps.

Although a single treatment study plan has been discussed, under which 50% of the turbines would be curtailed up to 5.0 meters per second (mps) wind speed and the other 50% would operate normally, IF&W and the applicant have agreed that the final design of the study should be finalized in consultation with the Principal Investigator from Bat Conservation International or the University of Maine. IF&W would prefer to test multiple treatments, in which some of the turbines would be curtailed at 3.0 mps, some at 5.0 mps, others at 6.5 mps and the remaining turbines would operate normally. However, we understand that to produce statistically significant results that will withstand peer review, it may only be feasible to study the single treatment rather than the more thorough multiple treatments. As stated above, IF&W and the applicant are in agreement that the particular study protocols should be developed by the Principal Investigator in consultation with IF&W and the applicant.

Any final study design should include a “short-circuit” provision in case of specific high-mortality events or higher than expected bat mortality rates at non-curtailed control turbines. Under these conditions, the study would be suspended, and all turbines would be curtailed at wind speeds less than 5.0mps pending consultation with IF&W and/or US Fish and Wildlife Service.

Curtailed is not designed specifically to avoid or minimize bird mortality, and we are not aware of any data that shows that it will have that effect. However, it is reasonable to expect mortality of nighttime migrant species to be lower on nights when the turbines are not rotating.

“2. How does IF&W recommend that bird and bat mortality monitoring and oversight be conducted on an ongoing basis throughout operation at the wind power facility? Include a discussion of the thresholds that should trigger specific mitigation procedures, including curtailment, and how the results of those procedures would be evaluated.”

MDIFW Response:

Adequate population data are not available to determine mortality thresholds at which impacts to a bat species become significant on a population level. We do know that populations of many bat species are in steep decline for a number of reasons, including White Nose Syndrome, therefore any avoidable mortality is cause for concern. Rather than identifying a specific threshold, IF&W has recommended that all possible means to avoid bat mortality be implemented from the beginning of the project, including curtailment, and avoiding nighttime lighting of the facility.

At present, operational curtailment of all turbines during periods of bat activity as recommended, or as to be determined by the curtailment study described in Question 1, is the best method we have of avoiding and minimizing bat mortality.

Regarding birds, IF&W has not requested studies beyond the initial post-construction monitoring that has become standard on wind power facilities in Maine. However, any discovery of state or federally listed species should be reported to the appropriate agency and mitigation measures, if any, should be decided at that point. Similarly, any unusual mortality

event at a specific turbine or across the facility in a short period of time should be reported and mitigation measures considered.

“3. Provide written comments on the additional vernal pool information submitted by the applicant on May 16, 2011.

MDIFW Response:

IF&W has reviewed the additional survey forms and information provided by the applicant on May 16, 2011. The applicant has provided all the necessary information and has sufficiently avoided or minimized impacts to Significant Vernal Pools (SVP) and Potentially Significant Vernal Pools (PVP). Impacts to all SVP and PVP buffers will be less than the 25% threshold (see #4 for a discussion of the one exception), so no further recommendations or mitigation are necessary.

“4. Summarize the agency’s position that was discussed at the hearing on the impacted significant vernal pool located near the proposed Operation & Maintenance site in the Bangor Hydro Transmission Line corridor.”

MDIFW Response:

The 250 foot buffer zone around SVP 34CF-N is currently 39% cleared, as a result of existing forestry roads and a cleared powerline Right of Way. IF&W initially flagged this vernal pool as being unduly impacted by the change of use from forestry roads to wind farm operations roads. However, in consultation with the applicant, it appears that only a very small portion of the existing road and none of the powerline Right of Way will be under the operational control of First Wind. To be consistent with the way this issue is handled under DEP jurisdiction, IF&W only calculates impacts to a vernal pool buffer that are under the control of the applicant. We have not been given an exact percentage of the impact that will be under First Wind’s control, but it appears to be a fraction of the allowable 25% of the buffer zone. Given this information, IF&W does not consider impacts to SVP 34CF-N to be unreasonable and we are not suggesting any form of mitigation.