

SHEFFIELD WIND FARM
STIPULATION OF UPC VERMONT WIND, LLC AND
THE VERMONT AGENCY OF NATURAL RESOURCES

Whereas, UPC and ANR (the parties) have been engaged in ongoing and good faith discussions concerning the proposed Sheffield Wind Farm (the Project) (as described in UPC's Amended Petition in Docket 7156) and the study of potential impacts on wildlife and wildlife habitat, including but not limited to black bears, birds and bats.

Whereas, the parties recognize that there is some degree of scientific uncertainty concerning the indirect impacts of a wind project on black bear use of nearby habitat, and on potential bird and bat fatalities at a wind project on a forested hilltop in the northeast. The parties also recognize that their scientific experts may have differing views on both the degree of scientific uncertainty, and the degree of risks posed by the wind project.

Whereas, the parties agree, nonetheless, that based upon the site-specific studies that have been performed and other available information, UPC has met its burden of proof under the wildlife criteria of section 248, and the Sheffield Wind Farm is not expected to pose an undue adverse impact to wildlife, provided the mitigation and studies outlined in this MOU are implemented. Specifically, this MOU resolves issues raised in ANR's prefiled testimony, including the testimony of Shannon Morrison, John Austin, and Scott Darling in regards to potential impacts to birds, bats, bears, and wildlife utilization of Wetland #22.

Whereas, the parties recognize it is in their mutual interest to reach understandings concerning the Sheffield Wind Farm, in particular, mitigation related to black bear habitat, mitigation to reduce the risk of bird and bat mortality, post-construction fatality studies for birds, and a mortality study review process.

Whereas, UPC has agreed to provide for the funding of decommissioning and site restoration measures for the Sheffield Wind Farm, ANR recognizes that the wildlife habitat impacts associated with the Project are likely to be more ephemeral than those associated with certain other types of development (i.e., residential construction, ski area development).

Whereas, UPC has agreed to provide ANR with access to the Project site – with appropriate notification – for the life of the project to facilitate study of the potential impacts of the project on wildlife and the effectiveness of mitigation measures as described below.

Whereas, the parties agree that their discussions have progressed to the point that the further details of mitigation and studies can be reviewed and approved as post-CPG filings.

Whereas, the parties agree that nothing in this MOU shall establish precedent for future cases, or shall constitute an admission or concession by either ANR or UPC, and

In consideration of the mutual understandings reached herein, both parties agree to the following:

1. Black bear habitat –
 - a. UPC agrees to provide assurances through Meadowsend Timberlands, Ltd. That MTL's 2,700 +/- acre King George Forest parcel, within which a portion of the Project is located, will remain in forest management and will not be developed for the life of the Project. As a contiguous parcel this area provides a variety of black bear habitat components, including concentrated and dispersed bear-scarred beech habitat, wetlands, and various seral stages of upland forest. These assurances shall be accomplished through a written agreement that would run with the land, that terminates upon decommissioning of the Project, following the completion of site restoration measures, and that allows timber operations to continue but prohibits other development. A plan for implementing site restoration measures following decommissioning shall be reviewed and approved by ANR and submitted to the PSB for final approval.
 - b. A habitat management plan will be established in coordination with UPC, ANR and MTL, that is consistent with MTL's forest management objectives for the site, while ensuring the proper stewardship and enhancement of the critical bear habitat features identified in (a). This plan shall be reviewed and approved by ANR and submitted to the PSB for final approval prior to commercial operation of the Project.
 - c. During project operations, UPC may, in consultation and coordination with ANR, conduct or cooperate in conducting research into the possible effects of the Project on black bear use of adjacent habitats. Any such research shall be conducted in accordance with proper research protocols that must be the result of a coordinated effort between the two parties and be reflected in a research proposal that shall be reviewed and approved by both parties and filed with the PSB. If such research indicates that the Project is not having an undue adverse impact on habitat utilization by bears (and in particular female bears) due to avoidance of the bear-scarred beech habitat that is within ¼ mile of the turbines, UPC may seek ANR's concurrence that the agreement with MTL can be scaled back, modified in some way, or possibly even discontinued. UPC and ANR agree to work in good faith regarding the evaluation of any such information, and ANR agrees that its concurrence shall not be unreasonably withheld.
2. Bat Mitigation Plan –
 - a. UPC and ANR agree that based upon currently-available information, the Project is not expected to pose an undue adverse impact to bat populations. However, the parties also recognize that a degree of uncertainty exists regarding potential impacts to bats from a Vermont-sited wind project. Recent and ongoing research at operating wind energy projects in other states suggests that the risk of bat fatalities is greater during the late summer/early fall dispersal and migration periods, on evenings when winds are light (i.e., about 4-6 m/s or less), and when air temperatures are above about 45-50 deg F.

- b. The parties agree to work together post-CPG to develop criteria for modifying project operations in order to substantially reduce the risk of bat collisions, while at the same time minimizing impacts to project operations. For the purposes of estimating an outside maximum cost to the project, UPC agrees that curtailment of turbines could extend up to the periods specified below:
 - i. For up to 120 nights between June 1 and September 30;
 - ii. For up to 8 continuous hours per night (e.g., 8 p.m. through 4 a.m., or 9 p.m. through 5 a.m., etc.; and
 - iii. When average wind speed (10 minute interval) at the hub height of a turbine is 6 m/s or below; and
 - iv. Air temperature at hub height is above 49 deg F.

The parties agree that the final criteria shall require approval by the Board prior to commercial operation of the Project.

- c. The above-described curtailment conditions shall be in lieu of any requirement to conduct bat fatality monitoring at the Project, outside of that described in 3.1 below. UPC will not be required to curtail operations or provide additional bat mitigation above or beyond the conditions specified above. However, UPC may support or cooperate in research into bat impacts in consultation with ANR for the purpose of reducing the total amount of curtailment, modifying curtailment conditions to better suit operations, or reducing bat impacts. Such research may involve experimental operation of the turbines during curtailment conditions, provided it is with the concurrence of ANR and in close consultation with ANR biologists, and does not pose an undue hardship for UPC operations staff or resources.
 - d. Either party may petition the Board to revisit these conditions, in consultation with one another, to provide evidence that curtailment can be modified (or an alternative mitigation measure substituted) to better suit operations without resulting in undue adverse impacts to bat populations. Evidence may be in the form of new research conducted at other operating projects, or from research conducted at the Sheffield project as described above.
3. Post-construction bird fatality monitoring – UPC and ANR agree that based upon currently-available information, the Project is not likely to pose an undue adverse impact to bird populations. However, the parties agree that collecting data to estimate bird fatalities during project operations provides a basis for a carefully informed determination regarding impacts to birds. ANR and UPC further acknowledge the opportunity presented by this project to offer applicable data regarding bird and bat mortality associated with utility-scale wind energy on ridgelines in Vermont. Toward this end, UPC agrees to work with ANR as a condition of the CPG, to prepare an appropriately-designed post-construction bird fatality monitoring protocol for meeting these objectives. The parties agree that the

final protocol shall require approval by the Board prior to commercial operation of the Project. The protocol will:

- a. Employ “state-of-the-art” mortality survey methods and techniques that have proven effective at other wind energy facilities in the eastern United States.
- b. Establish a sampling design that will result in data collection with sufficient frequency at a statistically valid sample of turbine locations within the project.
- c. Benefit from the assistance or review of a trained statistician for sample design and the statistical analysis of sample data.
- d. Ensure bird mortality surveys are conducted by qualified biologists/technicians that are experienced and trained in conducting surveys of this type.
- e. Include measurement and recording of meteorological data during each day of surveys.
- f. Include searches following significant weather events (e.g., cold fronts, strong north or south winds, periods of fog and precipitation) to assess the effects of environmental variables on collision rate.
- g. Include collection of all bird carcasses for identification by a qualified professional. Collected carcasses will be made available to ANR for record keeping, proper scientific handling and necropsy, if necessary.
- h. Include mapping of bird carcasses where found using sub-meter GPS technology.
- i. Include a scavenging rate control test for each operation assessment season using dead birds to estimate the rate of carcass removal by scavengers.
- j. Include a searcher efficiency control test each season and/or for each set of searchers employed.
- k. Allow for monitoring to be conducted by a third party and funded by UPC, subject to UPC’s approval.
- l. Provide for the collection and identification of any bat carcasses located during bird fatality searches.

As currently envisioned, mortality surveys will be conducted during the spring and fall bird migration periods during the first year of project operation, with follow-up searches as necessary over the course of the second and third years of project operation. During this three year period a maximum 600 turbine searches will be conducted. A turbine search is defined as one search conducted at a single turbine.

The timing and number of searches will be tailored to focus on specific periods or events of greatest interest, in consultation with ANR, with the understanding that reasonable efforts will be made to keep the time and costs associated with mobilizing/demobilizing searchers to a minimum.

4. Review of bird fatality data; mitigation measures – UPC and ANR agree to engage in a cooperative, team-based process to prepare the protocol and review bird mortality data. If at some point in time prior to the completion of 600 turbine searches, sufficient data is collected to confirm that under a reasonable range of “typical” meteorological conditions the Project is not likely to pose an undue adverse impact on bird populations, further action by UPC will be limited to monitoring strategies designed specifically to “spot check” following potential catastrophic events, such as those resulting from important weather events. UPC agrees to cooperate with ANR and to consider measures to reduce any impacts that are documented.

If post-construction monitoring demonstrates that the Project is having an undue adverse impact on bird populations, UPC and ANR will work together to identify the problem and prescribe appropriate, practical and reasonable measures for avoiding or minimizing continued impacts. Actual measures to be taken will depend on the type and severity of impacts, cost benefit considerations, likelihood of accomplishing the desired outcome, and practicality. UPC and ANR agree to work together to establish criteria and mortality thresholds based on post-construction mortality survey analysis that will trigger mitigation.

The parties agree to use their best efforts to reach consensus in this review process. In the event that consensus cannot be reached, ANR may choose to petition the PSB on whether further monitoring or mitigation should be considered, and UPC shall have the right to present its position to the Board.

Executed this 31st day of January, 2007 in Montpelier, Vermont

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UPC Vermont Wind, LLC