US Fish and Wildlife Service Proposes Voluntary Guidelines for Assessing Wildlife Impacts of Land-Based Wind Energy Projects

The US Fish and Wildlife Service (FWS) has published a notice of availability of its "Draft Land-Based Wind Energy Guidelines," which establish a comprehensive methodology for evaluating and addressing impacts to affected species as a result of land-based wind energy projects. Among other significant changes from prior guidance, the Guidelines include extensive requirements for pre-development and post-construction monitoring and apply expanded "adaptive management" concepts that could require assessment and implementation of operational changes on an ongoing basis.

The Guidelines are intended to implement the FWS's responsibilities under the Endangered Species Act (ESA), Migratory Bird Treaty Act (MBTA), and Bald and Golden Eagle Protection Act (BGEPA). They outline a tiered approach for identifying potential impacts to fish, wildlife and their habitats arising from land-based wind energy projects, and for considering measures to avoid, minimize and compensate for those impacts. The Guidelines are intended to address direct effects, such as blade strikes, barotraumas, and displacement, as well as indirect effects, such as decreased survival or reproduction, increases in predation pressure, barrier effects, habitat fragmentation, and noise impacts.

The Guidelines are voluntary, but compliance will be considered evidence of due care with respect to avoiding, minimizing and mitigating adverse impacts to species protected under the MBTA and the BGEPA, and will be taken into account when the FWS is exercising its discretion with respect to any potential referral for prosecution related to the death or injury of a protected species. Compliance with the Guidelines does not provide authorization to take protected species, and if a take is expected, the developer must seek appropriate permits.

The Tiered Approach

The tiered approach set forth in the Guidelines follows an iterative process for collecting information, quantifying the potential risks and evaluating those risks for use in siting, construction and operation decisions at wind energy projects. Each successive tier refines the information and builds upon the issues raised and efforts undertaken in prior tiers, as the project moves through the various stages of the development process. The guidelines establish 5 tiers, as follows:

- Tier 1 is the preliminary evaluation or screening stage for assessment of potential sites (defined as landscape scale screening of possible project sites);
- Tier 2 is the site characterization stage, for the broad characterization of one or more potential project sites;
- Tier 3 is the preconstruction monitoring and assessment stage for the site-specific assessment of a proposed project site (this is the first tier in which quantitative monitoring and assessments are conducted);

- Tier 4 is the post-construction monitoring stage, intended to monitor the effects of the project, including evaluation of fatalities and other effects; and
- Tier 5 allows for additional research to further evaluate direct and indirect effects, and to address data gaps.

The first three tiers correspond to the pre-construction evaluation phase of development, while Tiers 4 and 5 refer to post-construction monitoring, assessment and research. Each tier contains a series of questions intended to guide the decision-making process.

At the conclusion of each tier, a range of outcomes is possible. These include: abandonment of the project due to unacceptable impacts; continuation of the process with additional data collection and/or implementation of mitigation measures; and continuation of project development as designed without additional data collection. If, at the conclusion of a tier, the answers to the posited questions indicate little potential for risk, the developer may conclude that application of the tiered approach may end at that particular tier. The FWS encourages consultation before finalizing a decision to end the assessment process.

Extent and Duration of Required Monitoring

The Guidelines outline expectations regarding the scope and duration of the required investigations and studies under each tier. The information gathered at each stage is intended to inform the studies required at each subsequent stage.

The Tier 1 preliminary evaluation or screening of potential sites is intended to be a broad review at the "landscape level." It should include review of available databases and other publicly available information regarding wildlife values and potential restrictions on development, such as designated critical habitats and conservation areas. In addition, developers should coordinate with the FWS and appropriate state resource agencies regarding potentially affected species and their ranges, as well as other relevant federal, state, tribal and local agencies. The Guidelines further recommend coordination with private conservation organizations in the vicinity of a prospective site.

A Tier 2 site characterization is focused at the site level and is intended to identify potential sites within the geographic area under consideration that would be appropriate for wind energy development. The site characterization should include identification of the potentially affected species that are present at, or may use, the site, as well as suspected areas of congregation, such as nesting sites, maternity roosts and migration corridors. The assessment should include at least one site reconnaissance visit at each prospective site. In addition, site visits should be conducted at sufficient intervals to account for seasonal variation.

The Tier 3 pre-construction study is the first tier to require quantitative monitoring and assessment of potential sites to evaluate the risk of the proposed project. The pre-construction study is focused on (i) identifying local populations of potentially affected species that are present or are likely to use the subject site, (ii) quantifying the distribution, abundance and site use of the species identified in Tier1 and 2 and (iii) quantifying the potential risk to the identified species as a result of the proposed project. In order to establish a trend in site use and conditions that accounts for annual and seasonal variation, the studies are expected to occur over multiple years. Generally three years of preconstruction studies is considered appropriate.

Tier 4 investigations can generally be divided into two categories: (i) fatality monitoring and (ii) monitoring for other effects. Fatality studies are considered necessary to confirm earlier predictions regarding species impact. As with preconstruction studies, there is an expectation

that post-construction monitoring will generally be conducted over a period of years. At sites where the perceived risk is low, two years of monitoring may be sufficient. Where the risk is considered moderate, a minimum of three years will be required. Where the risk is considered high, a minimum of five years of assessment is required.

Tier 4 monitoring for "other effects" should generally include assessment for effects resulting from habitat impacts, including habitat loss or modification, habitat fragmentation, barrier effects, displacement, and noise impacts. In addition, it should assess for demographic effects—including effects at the local, regional or population-wide level.

Tier 5 provides for additional research to be conducted at developed sites. Research should be pursued when there is a need to address risks and uncertainty; it may also be pursued by a developer to address gaps in knowledge, to evaluate the effectiveness of best management practices and as a key component of an adaptive management program. Research may be appropriate where mortality rates or other direct or indirect effects are at higher levels post-construction than had been predicted preconstruction. It may also be appropriate where monitoring indicates that mitigation measures have been less effective than had been anticipated. Tier 5 research duration will depend on the research question and study design identified during earlier tiers, and may require post-construction monitoring of durations longer than the minimum three years recommended for fatality monitoring.

Mitigation

Under the Guidelines, where impacts to species resources are expected, mitigation measures must be pursued. Mitigation includes actions to avoid, minimize and compensate for adverse effects resulting from a project. Where such impacts are unavoidable, compensation may be required. Compensation is where project induced losses to affected species resources are replaced or offset with resources of equivalent biological value, or through the provision of funds to enhance available resources. For example, compensation may be required where a take of affected species in unavoidable, or to offset unavoidable impacts resulting from habitat loss. Avoidance and minimization of adverse effects are the preferred methods of mitigation and should be pursued before resorting to compensation. When used, compensation must be commensurate with the effects anticipated.

Adaptive Management

The guidelines specifically incorporate the concept of adaptive management into the assessment and decision making process. Adaptive management is defined as:

> [A] decision process that permits flexible decision making that can be adjusted in the face of uncertainties as outcomes from management actions and other events become better understood.

Adaptive management requires that management and mitigation measures be adjusted if monitoring indicates that goals are not being met. The effect of incorporating adaptive management concepts into the assessment process is that assessment becomes an iterative, ongoing process. In other words, changes to operations or to the implementation of evolving mitigation measures may occur on a continuing basis in response to ongoing assessment. This approach may introduce significantly greater uncertainty into the assessment process and extend the timeframe for assessment. The FWS's use of adaptive management is guided by the US Department of the Interior's Adaptive Management Technical Guide available at: http://www.doi.gov/initiatives/AdaptiveManagement/index.html.

Wind Turbine Guidelines Advisory Committee Recommendations

In developing the guidelines, the FWS considered the recommendations of the Wind Turbine Guidelines Advisory Committee (WTGAC). The WTGAC was established in 2007 by the Secretary of the Interior for the express purpose of providing recommendations to revise the guidelines related to land-based wind energy facilities. It consists of 22 members representing federal, state and tribal agencies, wildlife conservation organizations and the wind industry. The WTGAC recommendations were submitted to the Secretary of the Interior on March 4, 2010.

The Guidelines differ from the WTGAC in significant ways. For example, the WTGAC recommendations did not include specific requirements for study duration, while the draft Guidelines include a preconstruction study minimum duration of three years and a post-construction study minimum duration of two years (extending up to a minimum of 5 years of post-construction study for certain projects). Further, while the WTGAC recommended consideration of costs in various sections, the draft Guidelines include no consideration of cost. The Guidelines also include consideration of noise effects, which was not recommended by the WTGAC, and significantly expanded reliance on adaptive management concepts when compared to the WTGAC recommendations.

Conclusion

The proposed Guidelines establish significantly expanded methodologies for assessing and addressing impacts to potentially affected species at land-based wind energy projects. They include specified pre-development and post-construction monitoring requirements that have the potential to significantly expand the time horizon for wind project development. In addition, they incorporate adaptive management concepts that may require ongoing assessment and alterations to operational practices, introducing uncertainty regarding future operational projections. Wind industry members should review and carefully assess the impact of the proposed Guidelines on their own projects and should consider submitting comments during the public comment period. The FWS is accepting public comments on the draft guidelines through May 19, 2011.

Email comments can be submitted to windenergy@fws.gov. Comments should include "Wind Energy Guidelines Comments" or "Eagle Conservation Plan Guidance Comments" in the subject line, and the commenter's full name and return address in the body of the message. Alternatively, comments or recommendations can be submitted by mail to: Attention: Wind Energy Guidelines; Division of Fisheries and Habitat Conservation; US Fish and Wildlife Service; 4401 North Fairfax Drive, Mail Stop 4107; Arlington, VA 22203-1610 or Attention: Eagle Conservation Plan Guidance; Division of Migratory Bird Management; US Fish and Wildlife Service; 4401 North Fairfax Drive, Mail Stop 4107; Arlington, VA 22203-1610.

Upon consideration of comments received, the FWS intends to issue final Guidelines that will supersede the FWS 2003 Interim Guidance on Avoiding and Minimizing Wildlife Impacts from Wind Turbines. Further information is available at the FWS wind energy website at http://www.fws.gov/windenergy. The FWS intends to post updates on continuing developments and new information relating to these guidelines and related issues at the website.

For more information about the proposed Guidelines, or any other matter raised in this Legal Update, please consult your regular Mayer Brown contact or the author of this update, listed below.

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