PUBLIC SERVICE COMMISSION

July 6, 2006

NOTICE OF OPPORTUNITY FOR PUBLIC COMMENT ON RECOMMENDATIONS OF THE WIND ENERGY TECHNICAL ADVISORY GROUP

The legislation which established the Renewable Energy Portfolio Standard in 2004, codified at Section 7-701 *et seq.* of the Public Utility Companies Article of the Maryland Code, also required the appointment of a Wind Energy Technical Advisory Group ("Wind TAG"). The Wind TAG was to assist the Public Service Commission ("Commission") by developing recommendations on siting, operational, and monitoring criteria for wind-powered electricity generating facilities intended to mitigate the impact of these facilities on avian and bat species.

On March 8, 2005, the Commission appointed the following persons to the Wind TAG:

- Dr. J. Edward Gates, University of Maryland Center for Environmental Science
- Dr. Chandler Robbins, Patuxent National Wildlife Center
- Tom Matthews, President, U.S. Wind Force
- Kevin Rackstraw, President, Clipper Wind Power
- Robert J. Horn, Partner, Patton Boggs, LLP
- Dr. Gwen Brewer, Science Program Manager, Maryland Department of Natural Resources
- Dr. Don Meritt, Maryland Ornithological Society
- John Sillin, Integrated Resource Planning, Public Service Commission

On June 6, 2006, the Wind TAG issued the attached recommendations to the Commission. The recommendations represent the diligent work of the members of the Wind TAG. On behalf of the citizens of the State of Maryland, the Commission wishes to thank each member of the Wind TAG for his or her efforts and the considerable amount of time devoted to this project.

Prior to initiating a formal rulemaking proceeding, the Commission invites public comment regarding the attached recommendations of the Wind TAG. The Commission intends to propose regulations for the siting, operation, and monitoring of wind-powered energy facilities which take into consideration the recommendations of the Wind TAG and any public comments received. Further, the Commission directs its Staff to prepare regulations after considering public comments on the Wind TAG recommendations. When these proposed regulations are

published, interested persons will have an opportunity to provide public comment on the proposed regulations as provided by the Maryland Administrative Procedures Act.

Persons interested in commenting on the recommendations of the Wind TAG should file an original and fourteen copies of their comments to O. Ray Bourland, Executive Secretary, Public Service Commission, 6 St. Paul Street, Baltimore, Maryland 21202-6806. All comments should be filed by Friday, August 4, 2006, and should include "Administrative Docket RM24" in the subject line. Comments may also be filed using the "eFile" system. Details of the "eFile" system can be found on the Commission's website at www.psc.state.md.us. Persons having questions regarding this Notice should contact Michael Dean at mdean@psc.state.md.us or 410-767-8149.

By Direction of the Commission,

O. Ray Bourland
Executive Secretary

Attachment

cc: Wind Energy Technical Advisory Group
Commentators in RM 12 – Renewable Energy Portfolio Standard

SITING GUIDELINES TO MITIGATE AVIAN AND BAT RISKS FROM WINDPOWER PROJECTS
FINAL RECOMMENDATIONS OF WIND ENERGY TECHNICAL ADVISORY GROUP

Introduction

As part of the legislation creating the Maryland Renewable Energy Portfolio Standard (RPS), the Maryland General Assembly required that the Maryland Public Service Commission establish a technical advisory group (TAG) to develop recommendations on siting, operational, and monitoring criteria for wind-powered electricity generating facilities related to bat and avian issues. Furthermore, the Commission was directed to adopt regulations for the siting of wind-powered electricity generating facilities before July 1, 2006, based on the recommendations of the TAG.

The information contained in this document provides a brief outline of the power plant licensing process in Maryland and the windpower siting guidelines. The guidelines are to inform a potential developer of the information relating to potential bird and bat impacts that will need to be provided to the state agencies tasked with reviewing a new application.

The information used to develop these guidelines is based on the best data currently available. Windpower is a rapidly developing technology and new information will be available in the future. These guidelines should be reviewed and updated as needed but on at least a five-year basis.

Licensing Power Plants in Maryland

In Maryland the permit to construct a power plant, the Certificate of Public Convenience and Necessity (CPCN), is issued by the Public Service Commission (PSC). There is no standard application form and all projects are treated on a case-by-case basis. Information necessary for an application can be found on the website http://esm.versar.com/pprp/licensing/licensing.html (April 2006) that provides links to the relevant PSC laws and regulations and DNR laws. Requirements expressed in these guidelines will generally be reflected in the requirements for a CPCN

An applicant should file for a CPCN from the PSC and pay a filing fee of $10,000.[1] There are three general stages to the CPCN process: a pre-application phase, the application phase, and the PSC hearings.

Pre-application Phase -- Before filing a CPCN application with the PSC, it is recommended that project developers contact, meet and discuss the project with the staff of the Maryland Power Plant Research Program (PPRP). In this pre-application phase of the CPCN process, the PPRP staff and the applicant scope out and identify any anticipated environmental and socioeconomic issues specific to the project and outline the steps to be conducted to address the identified issues. The pre-application phase may be the most important stage, as how the applicant responds to PPRP's informational needs largely determine the direction and speed of

[1] Code of Maryland, "Welcome to COMAR Online," COMAR 20.07.05.06, available: http://www.dsd.state.md.us/comar/20/20.07.05.03.htm (July 9, 2004).

the CPCN process. In addition, it is recommended that the Applicant do public outreach in the area where the project is to be constructed.

Application Phase -- The formal CPCN process begins after the applicant sends its application to the PSC. The application must address items such as minimizing impacts to air, surface and groundwater, aquatic and terrestrial resources, cultural resources, noise, and land use. The Commission dockets the application with a case number and delegates it to a Hearing Examiner for hearings. On the State's behalf, the PPRP acts as the lead agency in the PSC hearings.[2] PPRP, in conjunction with interested State agencies, reviews the environmental information submitted by the applicant; assesses the environmental, socio-economic, aesthetic and cultural resource impacts of the project; and recommends to the PSC a number of special conditions to be included with the CPCN, if one is recommended to be issued.[3] At any time, the applicant and one or more of the intervening parties may enter into a stipulation concerning recommended conditions the applicant must meet to receive a CPCN.

PSC Hearings Phase -- Other groups and individuals have the right to participate in the PSC hearing process, including affected residents, private organizations (e.g., environmental and public interest groups), city and county governments and federal agencies. After the application is filed and the PSC has referred the case to the Hearing Examiner Division, the assigned Hearing Examiner will issue a notice of a public meeting, the prehearing conference, where intervenors are identified and a procedural schedule for the case is established. Public notice of the meeting is the responsibility of the Applicant who must place notices in local newspapers, public libraries and similar actions. Further public meetings are held later in the process usually soon after the evidentiary hearings. All recognized interveners might file testimony, cross-examine the witnesses of other parties, and file position and rebuttal briefs regarding the application.

Once hearings are concluded, the Hearing Examiner considers the recommendations of the State, the testimony and briefs filed by the applicant and other parties, and then issues a decision on whether or not the CPCN should be granted and under what conditions. The Hearing Examiner's decision becomes final after 30 days unless an objection is filed. At that time, the PSC may issue an order upholding, denying, or amending the Hearing Examiner's order.

Following are guidelines established specifically for an applicant seeking a CPCN for a windpower facility in Maryland but are limited to issues relating to avian and bat impacts. A full CPCN is needed for all grid connected windpower projects.

---

2 PPRP works with other divisions in DNR, as well as the Maryland Energy Administration, Department of the Environment, Department of Transportation, Maryland Office of Planning, Department of Business and Economic Development, and Department of Agriculture.

3 The Office of People's Counsel, which represents residential consumer interests in regulatory proceedings, and the Maryland PSC Staff also may participate in CPCN hearings.

Guidelines Governing the Siting of Windpower Electric Generating Facilities

The following guidelines have been organized according to the five categories of issues called out by the legislation creating the Maryland RPS and identified by the Chairman of the Maryland Public Service Commission in his letter to the TAG on March 8, 2005.

1. Standards that will avoid or minimize impact on birds and bats from the construction and operation of wind-energy generating facilities. (Includes locational issues.)

- It is recommended that the Applicant consult with the DNR Power Plant Research Program (PPRP) well in advance of filing an application with the PSC. Failure to undertake this consultation may result in project delays. Issues of concern can be identified and avoidance or mitigation options discussed prior to start of the adjudicatory process. [4]
- The Applicant should avoid locations identified to have the potential for high risk to birds or bats, have unique habitat features, or are occupied by species of particular concern. These identifications may be made by the Applicant or the State, ideally in the preapplication phase of the project.
- The Applicant should be aware that there are federal laws and treaties protecting most US bird species and that there are potential penalties associated with violating those laws. Further, the US Fish and Wildlife Service has issued interim guidelines for practices protective of avian species during windpower development and operation[5]. At this time final guidelines have not yet been published.
- Consultation with DNR Natural Heritage Program (NHP) biologists shall be necessary for construction scheduling to avoid or minimize disruptions during the bird and bat breeding seasons.
- Clearly mark the boundaries of the allowed limits of physical construction disturbance. These limits will be developed in conjunction with NHP biologists during site visits associated with the State's environmental impact assessment.
- Bury onsite electrical collector cables when possible.
- Require developers to minimize perch sites on wind towers and turbines by:
  - Using tubular towers, as opposed to lattice towers, for turbines.
  - Constructing no permanent towers, including meteorological towers, that are supported by guy wires.
- Lighting on the turbines shall be minimized by
  - Lighting the fewest possible number of turbines;
  - Synchronizing the flashing cycles of all the strobes for improved visibility;
  - Installing red strobes, as opposed to white strobes[6], with the longest possible off cycle; and

---

4 As the analysis in a CPCN is case-by-case, previous cases may be useful guides to prospective Applicants, but they should not be expected to fully cover the issues in their case.

5 The interim guidance document is available at http://www.fws.gov/habitatconservation/wind.pdf (accessed May 16, 2006)

6 The US FWS interim guidelines for windpower projects recommend white strobes. Current research suggests that there is no difference between the two and red strobes are less of an annoyance.

- There shall be no permanently installed high intensity (e.g. sodium vapor lamps) for area lighting. The standard operating procedure for site lighting generally is that it should be in the "OFF" position unless needed for specific tasks.
- In the event the FAA requirements conflict with the avian and visual impact-related requirements imposed by this guidance, the FAA requirements shall govern.

2. A tiered system of standards that vary with the size of the wind-energy generating facility and the associated generating capacity.

- There is no *de minimus* exemption from the requirement for a CPCN for a grid-connected electricity generating project. Developers of small, "community wind" type projects (typically 1 to 3 turbines) should discuss the details of their projects with PPRP to ascertain the level of review that will be required. Very small (<250 kw) projects may be exempt under net metering rules.
- Under the CPCN rules, there are two tiers:
  - One tier that requires developers to adhere to siting guidelines as part of the CPCN; and
  - One tier that exempts projects from the guidelines if they are exempt from the CPCN process. These exemptions relate to the onsite use of generated power, and the details can be found in Section 7-207.1 of the Public Utility Companies Article.

3. Assessments of avian and bat populations before issuance of a Certificate of Public Convenience and Necessity.

- At the earliest possible stage in the planning process, the Applicant shall submit a request for Environmental Review from the State's Wildlife and Heritage Service. An environmental review request should include a cover letter describing the entire project and the full nature of the request, along with a map of the project location with site boundaries clearly delineated. The state's review will apprise the applicant of any species of concern occurring in the project area and provide recommendations to avoid impacts to them.
- More detailed identification of areas of concern will be developed by PPRP, NHP and other biologists during site visits associated with the State's environmental impact assessment.
- Standard protocols for all preconstruction monitoring and assessment studies required by these guidelines will be provided by NHP. In filing for a CPCN, the Applicant shall include:
  - The results of one year of monitoring on the proposed site for birds and bats. The monitoring shall be seasonally and spatially appropriate and may include radar monitoring for migrating birds and acoustic monitoring for migrating bats.
  - An assessment of potential bat habitat on the site.
  - The results of a Phase 1 avian risk assessment[7].

---

[7] This methodology is in the National Wind Coordinating Committee's *Studying Wind Energy/Bird Interactions:A Guidance Document* and is available at http://www.nationalwind.org/publications/wildlife.htm.

- The applicant shall include the results of a survey of breeding birds for the area encompassed in the proposed project. Additional emphasis may be required for species of concern known to nest within or near the project area.

- Additional monitoring needs for rare, threatened and endangered species may be identified by NHP biologists or experts employed by PPRP during the preparation of the State's environmental impact assessment.
- Unless deemed inappropriate by NHP, the results from all the prescribed studies will be considered public information and can be shared with the state, intervenors, and the public at large[8].

4. Additional monitoring studies of avian and bat populations and behavior during and after construction of a wind project.

- During construction, and subject to appropriate safety requirements and with prior notice, representatives of the State or their deputies will have access to the site to ensure the implementation of these guidelines.[9]
- PPRP will establish a peer review group external to the State Agencies and comprising relevant experts to assess monitoring plans and data.
- The Applicant shall undertake a post-construction study of bird and bat mortality rates associated with the operation of the wind turbines. The study protocol will be provided by NHP and the Applicant will reasonably comply with the following minimum requirements:
  - Monitoring shall be conducted for three years after the date of commercial operation of the project
  - Monitoring data shall be reported to the NHP, PPRP and the external peer review group after each migration period (i.e., twice per year); and shall include the species impacted and the associated weather conditions.
- Any additional research related studies identified by the State will not be the responsibility of the Applicant
- During the operational life of the facility and subject to appropriate safety requirements and with 24-hour prior notice, representatives of the State or their deputies will be granted access to the site.
- During the operational life of the facility, in the event that a larger than expected number of fatalities is observed, then NHP shall be contacted as soon as possible and at least within 24 hours. This number will be set by NHP and will be derived from the three-year post construction study. Biologists acting for the State may wish to retrieve the remains for analysis.

---

[8] The intent here is to create a database that will aid siting and site assessment of future wind projects. However, the NHP may not want to make public detailed data on all species identified. With respect to disclosure, Section 10-618(g) of the Public Information Act permits State agencies to deny access to site specific information about the location of protected plants and animals. It is applicable to all State agencies.

[9] No actual monitoring is anticipated during construction.

5. **Mitigation[10] appropriate to address any impact on avian and bat populations above a threshold level.[11]**

- In general efforts to avoid or minimize impacts should be explored before seeking mitigation actions.
- Any mitigation plan should conform with at least the following:
  - Actions in each mitigation plan should be graded in their implementation so as to reasonably reflect the level of the observed impact and the probability of successful mitigation. Furthermore, the plan should define and bound the operational limitations or costs associated with the mitigation action.
  - A mitigation plan may involve either onsite and/or offsite activities. Offsite mitigation may not be appropriate for species identified by the State as Rare, Threatened, Endangered or In Need of Conservation.
  - Any nesting/maternity areas disturbed through the construction of the wind project shall be reestablished as feasible.
- Mitigation plans may be identified during both the licensing and operational phases of a project
  - During the preparation of the State's environmental impact assessment, the need for potential minimization or mitigation plans for the project as a whole or for specific turbines may be identified. The triggers to implement the plans and the plans themselves will become part of the conditions filed in the CPCN proceeding.[12]
  - Unforeseen adverse impacts to bird and bat populations may occur once the project is operational. In such a case, the State shall seek corrective actions from the Applicant to avoid, minimize or mitigate the adverse impact. A corrective action plan based on an adaptive management approach will need to be developed. In the event that an agreement between the State and Applicant cannot be reached as to the corrective action plan, then an adjudicatory proceeding before a Hearing Examiner of the PSC will be constituted to resolve the need for or extent of the corrective action plan.
- No mitigation action undertaken under the directives in this section of the Guidelines can shield an Applicant from the requirements of Federal law relating to the protection of birds or endangered species.

---

[10] The term mitigation is often used in a generic context to cover activities that may more formally be defined as either minimization or mitigation. This section assumes the more generic use of the term. However, the U.S. Fish and Wildlife Service guidelines do make a more categorical differentiation.

[11] There are no prescriptive mitigation actions specified in these guidelines. The Applicant should have a sense of the extent of mitigation/adaptation that a project may need during the preapplication discussions with the State.

[12] Examples of mitigation actions from past windpower CPCN proceedings may be obtained from the evidentiary record of the cases that are available on the PSC website.