

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (DEC) REVIEW OF WIND ENERGY GENERATION PROJECTS

Introduction

DEC does not have general approval authority over siting of wind power projects, but is often an involved agency in the State Environmental Quality Review (SEQR) process, and has permit approval authority over construction of wind projects where specific resources subject to DEC jurisdiction are impacted. Wind projects can be located in a variety of landscapes, and each wind project development area contains features unique to that landscape that must be considered in an environmental review. There are, however, a number of issues that commonly arise during the environmental review of most wind power projects in New York State.

Freshwater Wetlands Permit (Part 663)

A Freshwater Wetlands Permit is required for construction activities that disturb state-regulated freshwater wetlands and adjacent areas. Applicants must demonstrate that all efforts have been made to avoid or minimize wetland impacts from the proposed construction, reasonable alternatives have been considered, and mitigation is provided for any remaining wetland impacts. Applicable regulations are found in 6NYCRR Parts 663, available on DEC's website at: <http://www.dec.ny.gov/regs/4613.html>

Federal Clean Water Act (Section 401) Certificate

Many wetlands and streams are not regulated by DEC, but fall under the jurisdiction of the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act. Although DEC does not issue permits for these federally-regulated wetlands, the state must issue a Section 401 Water Quality Certification before USACE can approve a Section 404 permit. The certificate verifies that the federally approved action is in compliance with State water quality standards or designated use of the water body. Applicable regulations are 6 NYCRR Part 608, available on DEC's website at: <http://www.dec.ny.gov/regs/4438.html#1588>

Use and Protection of Waters Permit (Part 608)

This permit may be required if construction of access roads, electrical interconnections, or any other project component disturbs the bed or banks of a state-protected stream. Protected streams are those classified by DEC as Class A, B, or C(t), or any stream segment defined as “navigable waters of the state” according to 6 NYCRR 608.1(l). Applicable regulations are available on DEC's website at: <http://www.dec.ny.gov/regs/4438.html>

Article 11 of the Environmental Conservation Law

If construction or operation of a wind power project results in impacts to state-listed threatened or endangered species or their habitat, the Department will have jurisdiction under Article 11 of the Environmental Conservation Law. Measures to avoid adverse impacts include avoidance of construction in critical habitat areas, scheduling construction to avoid interruption of breeding, feeding, and migratory activities, and re-location or elimination of specific project components if any of these are determined to result in actual or potential adverse impacts.

State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (GP-0-08-001)

Construction Activities that disturb one or more acres of land must be authorized under this general permit. This requires the preparation of a Storm Water Pollution Prevention Plan (SWPPP) and submission of a Notice of Intent (NOI) to DEC for authorization to commence construction under this permit. Applicable terms of this general permit are available on DEC's website at: <http://www.dec.ny.gov/chemical/43133.html>

State Environmental Review Act (SEQR)

DEC will actively participate in the SEQR review for all utility-scale wind power projects to ensure that resource issues of statewide concern are identified and assessed in the environmental review process. If impacts are identified in the environmental review, DEC also recommends ways that the impacts could be avoided or reduced. For a better understanding of the SEQR process, please consult our website at: <http://www.dec.ny.gov/public/357.html>

For large utility-scale wind projects, DEC recommends the preparation of an environmental impact statement (EIS) to fully describe the potential environmental impacts and proposed mitigation measures to reduce these impacts. DEC further recommends that formal scoping be conducted under the SEQR process to allow for adequate public participation in determining the content of the EIS. The following are recommendations that DEC will typically make for consideration in a Draft EIS (DEIS) for a wind power project.

- ***Project Site and Proposed Activities***

DEC recommends that the DEIS include a detailed description of the project development area, including geographical, topographical and other physical features, state and federal wetlands, waterbodies, drainage, and a summary of the wind resource. A complete description of the proposed project, including all project components, their location and construction specifications, should be included.

- ***Bird and Bat Impacts***

Results of pre-construction surveys for resident and migratory birds and bats, prepared according to DEC guidelines and consultation with agency Fish & Wildlife staff, should be included, with a discussion of potential impacts, avoidance measures and proposed mitigation measures. The DEIS should include preliminary plans for post-construction collision mortality and habitat displacement monitoring. The goal of a post-construction monitoring program is to measure actual mortality and displacement of birds and bats from operation of a wind power project. Data provided by these studies can then be compared against the pre-construction data collected to validate impact predictions. DEC recommends that post-construction monitoring be conducted because wind turbines are a relatively new component of the landscape and there are inherent difficulties in predicting the behavior of birds and bats in relation to this new type of landscape feature.

- ***Impacts to Threatened or Endangered Species***

Habitat and nest site surveys should be conducted for any federal or state-listed endangered, threatened or special concern fish & wildlife species that exist or may be affected by proposed activities in the project development area. A preliminary assessment to identify the potential for the presence of these species can be conducted through consultation with the New York Natural Heritage Program (information available at: <http://www.dec.ny.gov/animals/29338.html>).

- ***Natural Resource Impacts.***

The DEIS should include wetland delineation reports prepared for the proposed construction area, and discuss the potential wetland impacts that are likely to result from proposed construction activities. The project sponsor should discuss wetland avoidance and minimization efforts to reduce these impacts, reasonable alternatives considered that may further reduce wetland impacts, and proposed mitigation for residual impacts. Streams and navigable waters in the project development area should also be identified, with a discussion about how the project may affect these resources. As with wetlands, avoidance, minimization, alternatives and mitigation, including proper design and sizing of culverts, should also be discussed. Special attention should be given to the control of invasive species during project construction and restoration activities to minimize the spread of invasives in the project development area. The DEIS should also include a draft Storm Water Pollution Prevention Plan (SWPPP) for compliance with the SPDES Storm Water General Permit, (GP-0-08-001).

- ***Visual Impacts.***

A Visual Impact Assessment (VIA) should be prepared for the project using DEC's Visual Policy, *Assessing and Mitigating Visual Impacts, DEP-00-2*. Direct mitigation options described in the Visual Policy should be discussed, including screening and elimination or re-location of one or more proposed turbines. Where it is determined that direct mitigation is not practicable, DEC visual policy provides for consideration of visual offsets. This process is most appropriately conducted in concert with the cultural resources review prepared in accordance with state or federal historic preservation review processes (see below).

- ***Cultural and Archeological Resources.***

A record of consultation with the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) should be provided in the DEIS, along with results of archeological and historic architecture investigations undertaken for the project. The extent of state or federal agency involvement with the project should be discussed and associated historic and cultural resource protection requirements described. A discussion of mitigation measures proposed to be applied to offset any identified adverse impacts should be included. This process should be conducted in concert with the visual assessment prepared in accordance with the DEC visual policy (see above).

- ***Construction Management and Environmental Monitoring***

Environmental protection provisions identified during the environmental review should be incorporated into project construction specifications, and included in agreements with contractors to ensure that they comply with terms and conditions of environmental permits and mitigation requirements. An environmental monitoring plan should be prepared that provides for an independent monitor to ensure that environmental permit conditions and mitigation activities are properly applied during project construction and site restoration activities. The monitor needs to possess a working knowledge of state and federal regulations, natural resources (wetlands, streams, and any other unique local natural features), and be familiar with construction activities. The monitor ensures adherence to all permits, permit conditions, construction design plans and specifications, and has the authority to stop construction activities when non-compliance is observed and make on the spot corrections. DEC recommends that a team of monitors be available to be on-site when construction activities extend into evening hours and weekends.

- ***Environmental Restoration.***

An Environmental Restoration Plan should be prepared that describes re-grading and stabilization of temporary impacts to wetlands and streams, restoration of disturbed habitat, including re-planting suitable species in wetlands, adjacent areas and streams, wetland mitigation project construction, stabilization of disturbed areas subject to the SPDES Stormwater General Permit, removal and proper disposal of temporary road materials, and regrading soil in agricultural and forested areas in accordance with NYS Department of Agriculture and Markets guidelines or other Best Management Practices.

- ***Operations, maintenance, and decommissioning.***

The Operations and Maintenance (O&M) Plan for the project should include an environmental management component incorporating environmental considerations to be included in the ongoing maintenance of the facility. The plan should also provide for procedures to assess and minimize environmental impacts during major repairs, emergencies, and decommissioning. DEC recommends that opportunities be explored for creation of additional environmental enhancements during the life of the project beyond those required for restoration and mitigation, through cooperative partnerships with landowners, local governments, educational and conservation organizations.

- ***Alternatives Analysis.***

The alternatives analysis in the EIS should include the range of reasonable alternatives to the action that are feasible, considering the objectives and capabilities of the project sponsor. The description and evaluation of each alternative should be at a level of detail sufficient to permit a comparative assessment of the alternatives discussed. Alternatives described should include those that avoid or reduce adverse impacts identified in the

environmental review of the proposed action (e.g., can these impacts be avoided or reduced by reducing the project scale, re-configuring or re-locating project components?) Details to include in these evaluations should include the factors that led to the specific turbine layout for each alternative, such as wind resource evaluation, turbine spacing and/or orientation, wind turbine model selection, site constraints (setback requirements, avoidance of wetlands, landowner preference, etc.), access road and interconnect design considerations, and avoidance of identified adverse environmental impacts (e.g., archeological sites). The range of alternatives may also include, as appropriate, alternative sites, technology, scale or magnitude, design, timing, use, and types of action. An alternative for which no discretionary approvals are needed, or which largely avoids identified adverse impacts, should also be described. The range of alternatives must include the no action alternative. The no action alternative discussion should evaluate the adverse or beneficial site changes that are likely to occur in the reasonably foreseeable future, in the absence of the proposed action.

For more information about DEC review of wind power projects, send an email to or call the Division of Environmental Permits at (518) 402-9167.