

## 4.0 UNAVOIDABLE ADVERSE IMPACTS

The proposed Project will result in significant long-term economic benefits to participating landowners, as well as to the Town of Clayton, the local school districts, and Jefferson County (see Section 3.9). When fully operational, the Project will provide up to 96 MW of renewable electric power with no emissions of pollutants or greenhouse gases to the atmosphere. The development of the Project is consistent with surrounding land uses and will help maintain the area in agricultural and open space use.

Despite the positive effects anticipated as a result of the Project, its construction and operation will necessarily result in certain unavoidable adverse impacts to the environment. The majority of the adverse environmental impacts associated with the Project will be temporary, and will result from construction activities. Site preparation (e.g., clearing, grading), improvement of local roads, and the installation of roads, turbines, electrical interconnects, staging areas, the O&M facility, meteorological tower, and the collection substation/interconnection station will have short-term and localized adverse impacts on the soil, water, agricultural and ecological resources of the Project site. This construction will also have short-term impacts on the local transportation system, air quality, and noise levels. These impacts will largely result from the movement and operation of construction equipment and vehicles, which will occur during the approximately nine-month development of the Project. The level of impact to each of these resources has been described in Section 3.0 of the DEIS and will generally be localized and/or of short duration.

Long-term unavoidable impacts associated with operation and maintenance of the Project include turbine visibility from many locations within the town and surrounding areas. The presence of the turbines will result in a change in perceived land use from some areas. The Project also may help maintain land within the Project site in agricultural use, thus protecting agricultural resources, open space and existing land use patterns. Project development will also result in an increased level of sound at some receptor locations (residences) within the Project area, a minor loss of agricultural and forest land, wildlife habitat changes, and some level of avian and/or bat mortality associated with bird/bat collisions with the turbines. As described in Section 3.0, these impacts range in significance from minor to significant and potential impacts to some bird and bat species may require implementation of appropriate mitigation measures.

Although adverse environmental impacts will occur, they will be minimized through the use of various general and site-specific avoidance and mitigation measures. With the incorporation of

these mitigation measures, the Project is expected to result in positive, long-term beneficial overall impacts that will offset the adverse effects that cannot otherwise be avoided.

The following subsections summarize general mitigation and avoidance measures that have been incorporated into the Project design, and specific mitigation and avoidance measures proposed to minimize adverse impacts to specific resources.

#### **4.1 GENERAL AVOIDANCE AND MITIGATION MEASURES**

General mitigation measures include compliance with the conditions of various local, state, and federal ordinances and regulations that govern Project development, as well as the inherent characteristics of the Project. The primary government review/approval processes that apply to the Project include:

- SEQRA (Town of Clayton)
- NYSDOT and Jefferson County Highway Department regulations.
- Federal Clean Water Act regulations (Section 404 permit, Section 401 water quality certification) including corresponding required agency consultations with the US Fish and Wildlife Service for potential impacts to threatened or endangered species.
- Town of Clayton Wind Energy Facilities Law (Local Law No. 1 of 2007).
- NYSDEC water resources regulations (Environmental Conservation Law, Article 24 and Article 15; Section 401 water quality certification).
- NYSDEC threatened and endangered species protection regulations (Article 11).
- SHPO cultural resources review (National Historic Preservation Act of 1966 and the New York State Historic Preservation Act of 1980).
- NYSDEC SPDES regulations (stormwater management).
- Occupational Safety and Health Administration (OSHA) regulations (standard conditions for safe work practices during construction).
- NYS Agricultural Districts law.

SEQRA regulations require environmental review of proposed development projects so that potential adverse impacts and public concerns can be identified prior to Project implementation and avoided or mitigated, to the extent practicable. This DEIS was prepared in accordance with these regulations, and provides a primary means by which the potential costs and benefits of the Project are described and weighed in a public forum. Compliance with SEQRA regulations will assure that public and agency comments are solicited and appropriately addressed, Project alternatives are

evaluated, and potential adverse impacts are identified and mitigated to the extent practicable. Response to comments and preparation of a Final Environmental Impact Statement (FEIS) will provide the information necessary for the lead agency and other involved agencies to draw conclusions (Findings Statement) regarding the Project's overall environmental impacts and impose conditions on its approval, if necessary.

Compliance with the other various federal, state, and local regulations governing the construction and design of the proposed Project also will serve to minimize adverse impacts. Construction activities and building designs will be in compliance with state and local building codes and federal OSHA guidelines to protect the safety of workers and the public. State and Federal permitting required by the NYSDEC and the USACOE will serve to protect water resources and wildlife habitat, while state and county highway permitting will assure that safety, congestion, and damage to highways in the area is avoided or minimized. Compliance with town/county ordinances that may require building and highway permits will further serve to minimize impacts of the Project. The Town of Clayton Wind Energy Facilities Law contains protective requirements for the siting and regulation of wind power projects that are consistent with (or exceed) the requirements found in other local wind power ordinances in New York State.

Along with regulatory compliance, the final Project layout will be in accordance with various siting criteria, guidelines, and design standards that serve to avoid or minimize adverse environmental impacts. These include:

- Siting the Project away from population centers and areas of residential development.
- Siting turbines in compliance with all local set-back requirements to minimize noise, shadow flicker, and public safety concerns.
- Following NYSA&M's Guidelines for Agricultural Mitigation for Wind Power Projects.
- Avoiding streams and wetlands, or utilizing existing disturbed areas for stream and wetland crossings to the maximum extent practicable.
- Siting turbines primarily in open field areas to minimize forest clearing and impacts to habitat.
- Using existing farm roads for turbine access whenever possible, to minimize impacts to soil, ecological, and agricultural resources.
- Minimizing overhead transmission lines and designing any overhead transmission line in accordance with Avian Power Line Interaction Committee (APLIC) guidelines to minimize impacts on birds.

- Project design, engineering, and construction will be in compliance with various codes and industry standards to assure safety and reliability.
- Limiting turbine lighting to the minimum allowed by the FAA to reduce nighttime visual impacts, and following lighting guidelines to reduce the potential for bird collisions.
- Construction procedures will follow Best Management Practices for sediment and erosion control.
- Turbines will include grounding and automatic shutdown/braking capabilities to minimize public safety concerns.

#### **4.2 SPECIFIC MITIGATION MEASURES**

Project development and operation will also include specific measures to mitigate potential impacts to specific resources. These were described in detail in Section 3.0, but generally include the following:

- Developing and implementing a complaint resolution procedure to address landowner concerns throughout Project construction and operation.
- Developing and implementing various plans to minimize adverse impacts to air, soil, and water resources, including a dust control plan, sediment and erosion control plan (see Preliminary SWPPP in Appendix E, which includes a draft Spill Prevention, Control, and Countermeasure Plan)
- Undertaking a pre-construction breeding bird survey to avoid impacting any nesting listed species during construction.
- Documentation of existing road conditions, development of a road improvement plan, and undertaking public road improvement/repair, where necessary, at no cost to the town or county.
- Post-construction avian and bat monitoring studies to document Project impacts on birds and bats.
- A historic resource mitigation program to be developed in consultation with the SHPO.
- Entering into a PILOT agreement with the local taxing jurisdictions to provide a significant predictable level of funding for the town, county, and school districts.
- Development of an emergency response plan with local first responders.

#### **4.3 ENVIRONMENTAL COMPLIANCE AND MONITORING PROGRAM**

In addition to the mitigation measures described above, Atlantic Wind will develop an environmental compliance program and employ one on-site environmental monitor to oversee compliance with

environmental commitments and permit requirements. The environmental compliance program will be similar to that utilized on Iberdrola Renewable's Hardscrabble Wind Farm in Herkimer County (EDR, 2010) and will include the following components:

1. Planning – Prior to the start of construction, the environmental monitor will review all environmental permits and, based upon the conditions/requirements of the permits, prepare an environmental management document that will be utilized for the duration of the Project. This document will outline environmental requirements for construction and restoration included in Project permits and approvals.
2. Training – The environmental monitor will hold environmental training sessions that will be mandatory for all contractors and subcontractors. The purpose of the training sessions will be to explain the environmental compliance program in detail prior to the start of construction.
3. Preconstruction Coordination – Prior to construction, the contractor(s) and the environmental monitor will conduct a walkover of areas to be affected by construction activities. This walkover will identify landowner restrictions, sensitive resources, limits of clearing, proposed stream or wetland crossings, and layout of sediment and erosion control features. The limits of work areas, especially in sensitive resource areas, will be defined by flagging, staking, or fencing prior to construction, as needed.
4. Construction and Restoration Inspection – The monitoring program will include the inspection of construction work sites by the environmental monitor. The monitor will be present during construction at environmentally sensitive locations, will keep a log of daily construction activities, and will issue periodic/regular reports summarizing monitoring activities. Additionally, the monitor will work with the contractors to create a punch list of areas for restoration in accordance with issued permits. Following construction, Atlantic Wind or an environmental monitor will periodically monitor for two years following completion of site restoration (in accordance with NYSA&M requirements) to evaluate areas disturbed during construction and assure that agricultural resources are restored and maintained over the long term.