

# NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Permits & Pollution Prevention  
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January 12, 2016

Hon. Kathleen H. Burgess  
Secretary to the Commission  
New York State Public Service Commission  
Empire State Plaza  
Agency Building 3  
Albany, New York 12223-1350

Re: Case No. 14-F-0485; Lighthouse Wind Project; Preliminary Scoping Statement Comments

Dear Secretary Burgess:

The New York State Department of Environmental Conservation ("DEC" or the "Department") submits these preliminary comments to the November 23, 2015 Preliminary Scoping Statement (PSS) for Lighthouse Wind Project (Project), a proposed 201 MW wind powered electric generating facility located in the Town of Somerset, Niagara County and the Town of Yates, Orleans County, New York. They are as follows:

## 2.1.2.2 Operation

An Operations and Maintenance (O&M) Plan for the project should be developed and 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.

## 2.3.3.5 Gaseous, Liquid, and Solid Wastes

DEC's experience with other wind farms shows that spills of petroleum and other chemicals can be expected during the construction and operational phases. Though



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many of these spills may be small, they must be properly reported, cleaned up, and documented. The project sponsor should prepare a spills management plan that describes procedures to address proper reporting, cleanup, and documentation of spills.

#### 2.3.4.1 Construction

Before commencing construction activity, the owner or operator of a construction project that will involve soil disturbance of one or more acres must obtain coverage under the State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity. To gain coverage under the SPDES General Permit for Stormwater Discharges from Construction Activity, an owner or operator must:

- Develop a Stormwater Pollution Prevention Plan (SWPPP) in accordance with the requirements in the General Permit for Stormwater Discharges from Construction Activity.
- Submit a completed [Notice of Intent \(PDF\)](#) (NOI) (219 kb) to the Department.

It is of high importance, given the steep terrain involved in construction of this project with both access roads and collection lines, the applicant work closely with the regional water engineer in finalizing an acceptable SWPPP. The appropriate contact for this would be:

Region 8  
Scott Rodabaugh  
6274 E. Avon-Lima Road  
Avon, New York 14414

Region 9  
Jeff Konsella  
270 Michigan Avenue  
Buffalo, New York 14203

The Stormwater Pollution Prevention Plan (SWPPP) for any site disturbance subject to the SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-15-002) shall include plans for Erosion and Sediment Controls designed, installed and maintained in accordance with the most current version of the New York Standards and Specifications for Erosion and Sediment Control. Additionally, the SWPPP for projects that include the construction of permanent gravel access roads, shall include post-construction stormwater management practices designed in accordance with the most current version of the New York State Stormwater



Management Design Manual (Manual) (see Table 2, Appendix B of GP-0-15-002). Chapter 4 of the Design Manual should be used to determine the minimum sizing criteria for these post-construction controls.

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 regulatory conditions and mitigation activities are properly applied during project construction and site restoration activities. The monitor needs to possess knowledge of state and federal regulations, the regulatory documents generated as part of the Article 10 process, natural resources (wetlands, streams, and any other unique local natural features), and be familiar with construction activities and practices. The monitor ensures adherence to all permits, permit conditions, construction design plans and specifications, and has the authority to stop construction activities and make on the spot corrections when non-compliance is observed. DEC recommends that a team of monitors be available to be on-site when and if construction activities extend into evening hours and weekends such that the primary monitor is not available.

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. Special attention should be given to the control of invasive species during project construction and restoration activities to minimize the spread of invasive species in the project development area. For more information, please see the relevant section on invasive species set out below.

#### 2.4 Noise and Vibration

DEC recommends that sound pressure level analysis studies be consistent with the DEC's "Assessing and Mitigating Noise Impacts found at: [http://www.dec.ny.gov/docs/permits\\_ej\\_operations\\_pdf/noise2000.pdf](http://www.dec.ny.gov/docs/permits_ej_operations_pdf/noise2000.pdf). The following represents specific concerns with respect to wind projects.

The NYS DEC policy document, "Assessing and Mitigating Noise Impacts" places stress on reducing impacts above ambient levels. If a study shows an increase of less than 6 dB A above ambient levels, pursuant to the Department's Noise Policy, then sound pressure level analysis studies should take care to properly determine



ambient levels (or assume a level of 35 dB A, L90 – nighttime noise). To properly determine ambient noise, the studies are encouraged to sample multiple locations for ambient levels with a detailed discussion/rationale for their choice of placement of monitors and any factors that may cause a given location to be influenced towards a less conservative ambient level. Such factors could include work or hobbies conducted nearby (such as tractor or ATV use), traffic on nearby roads, higher wind levels (due to elevation and exposure), and quite a few other possibilities. Photographs of the monitoring locations should be provided with multiple vantage points as well as the times of day the sampling was performed. Care should be taken to explain the choice of minimum measurement periods.

Moreover, for rural locations such as the area in question, providing the L90 (the sound pressure level which is exceeded 90% of the time) in addition to the Leq is useful for providing a more thorough assessment of background levels. By providing the L90 (for both background and the post-construction estimate), a better grasp on the effect on the local residents can be obtained. As DEC's Guidelines discuss, the L90 is often used to establish background. It may be that people unconsciously use the L90 as a reference to judge the intrusiveness of the intermittent sounds. Background or ambient noise levels are, of course, influenced by such factors as road noise and wind, but it is important that the applicant explain the choice of locations with care to show that the results could not be unduly biased towards higher readings by non-representative events.

As DEC's guidelines discuss (see quote below), given situations which involve night-time noise (such as that generated by wind projects), a discussion of impacts on residents should consider possible disruption to nearby residents during the night. As mentioned below in the quote from our Guidelines, weighting night-time noise more heavily, such as the Ldn, may be appropriate for consideration in assessing the possible effects on local residents. Given the rural nature and low relative background levels, sleep may be disturbed at lower noise levels than in an urban/suburban environment.

Equivalent Sound Level (Leq) can be combined with other types of noise analyses such as Composite Noise Rating, Community Noise Equivalent Level and day night noise levels characterized by Ldn where an Leq(24) is measured and 10 dB A is added to all noise levels measured between 10 pm and 7 am. These different types of noise analyses basically combine noise measurements into measures of cumulative noise exposure and may weight noise occurring at different times by adding decibels to the actual decibel level. Some of these analyses require more complex noise analysis than is mentioned in this guidance."

One point in the DEC noise policy requires clarification - "For estimation purposes a seemingly serene setting such as rural farmland will be at the lower end of the scale at about 45 dB A." It should be noted that this was written with day time noise levels in mind – and that lower night time noise levels are likely to exist – by 5 to 10 dB A.

## 2.7 Terrestrial Ecology and Wetlands

### *2.7.1.2.1 Existing Conditions-Wildlife and Wildlife Habitats-Mammals*

Since the spread of white-nose syndrome, caused by the fungus *Pseudogymnoascus Destructans* began in 2006, the number of little brown bats (*Myotis lucifugus*) in New York has decreased drastically, and the species is no longer common throughout the state.

### *2.7.1.2.5 Existing Conditions-Wildlife and Wildlife Habitats-Protected Wildlife or Species of Concern*

This section states that bald eagles are "reported as occurring year round in the vicinity of the Project site." In April 2015, DEC confirmed an active eagle nest within the project boundary, and this information was conveyed to Apex on June 3, 2015. Similarly, DEC confirmed occurrences of short-eared owl (state-listed endangered species) and northern harrier (state-listed threatened species) within the project boundary during the winter of 2014-2015, and this information was conveyed to Apex.

This section also states that "during field surveys, biologists will determine if state or federally listed threatened or endangered species are present in the Project area, or could be affected by the construction or operation of the Project." Is Apex planning on conducting surveys for species other than birds and bats? If not, how will the presence or absence of sensitive amphibians, reptiles, turtles or other animal guilds be established?

### *2.7.2.1.1 Potentially Significant Adverse Impacts-Construction-Plant Communities*

When discussing permanent and temporary impacts to vegetation, it should be clarified that all clearing of forested areas is considered a permanent impact. Even if left to regenerate after construction, previously forested areas will take years, likely longer than the projected life of the project, to return to pre-construction condition.

DEC recommends that a close examination of the necessary means to prevent the spread of invasive species in the Project area be considered. Invasive species, if allowed to be introduced given the extent of the planned disturbance which would include many miles of access roads and electrical collection lines, would have a serious



detrimental effect on the ecology of the area. Hence an acceptable invasive species plan, and its careful implementation, is critical.

An acceptable invasive species plan must detail survey methods to identify currently existing invasive species listed in DEC regulations found at 6 New York Code Rules and Regulations (NYCRR) Part 575 in the project area so that these areas can be avoided when possible and proper measures can be taken when they cannot. The plan must specify how imported fill will be free of invasive species to the extent practicable, how fill leaving the site will be free of invasive species to the extent practicable, and how fill within the site will either be free of invasive species or only used within the area infested with the same invasive species. The plan must also address how site grading and erosion and sediment control will work together to prevent invasions. It should also address cleaning procedures for removing invasive species from equipment, preferably with a power-washer and personnel, location of designated equipment cleaning stations, location of off-site disposal (if the material is not rendered incapable of growth or reproduction) which must be either a landfill, incinerator or State-approved disposal facility. The intent is that equipment should arrive at the site clean and leave clean. Equipment and clothing-cleaning stations must be constructed so that invasive species seeds and other viable plant parts cannot escape in runoff or through other means.

The plan should describe the Best Management Practices or procedures that will be implemented to ensure that project activities do not result in introduction or spread of invasive species, especially in or near regulated areas of special interest to Natural Resources staff such as areas containing protected species or habitats within the project area. The plan should also provide measures for educating workers about invasive species and how to prevent their spread, identify work areas which will trigger cleaning activities (such as prior to using mats in streams and wetland and wetland adjacent areas) and identify methods to prevent and control the transport of invasive species as well as how to clean equipment and clothing using acceptable methods. The plan must list all planting and seeding materials to be used and specify mulch free of invasive species.

The plan should also detail post-construction monitoring and survey approaches, preferably for at least 5 years which would ensure that the objective of no net increase in invasive species was accomplished. If areal coverage of invasive species in the ROW project area increases over the baseline survey level remedial action should be considered, with consultation with DEC and USACE. If the goals of the invasive species control plan are not met within five years post-construction, a revised control plan containing additional control actions for an additional monitoring term will be submitted.

Here are some examples of Best Management Practices:

- Planning and Design - Include an ecologist in the design and development process. Make sure that invasive species are addressed at the planning and design stage. Review plans during development of specifications and engineering.
- Movement and Maintenance of Equipment - Minimize Spread: Prior to moving equipment out of an infested area and into an un-infested area, clean soil and debris from exterior surfaces, to the extent practical.
- Vegetation Management - Locate and use staging areas that are free of invasive plants to avoid spreading seeds and other viable plant parts. Consider: Set up activity boundaries to exclude areas with an invasive species infestation that could be disturbed by equipment, workers, or users. Consider options for the sequence of operations within an activity area, and where feasible, plan to enter areas infested with invasive species last.
- Soil Disturbance - Minimize the spread of invasive species during soil disturbance. Consider reusing material from infested areas within limits of infestation. Stabilize disturbed soils using erosion control management standards ASAP. Considerations: Use weed-free mulch and weed-free sand and gravel.
- Re-vegetation - Where site conditions permit, allow natural re-vegetation of the corridors, staging and laydown areas to occur. If seeding or planting is necessary to minimize the threat of highly damaging invasive species from spreading, use native seed or non-invasive cover crops for re-vegetation.

Given the extent of disturbance and that the site contains forest, a careful examination of habitat fragmentation should be included that would span not only birds and bats, but plants and other animal species. Habitat loss and invasive species are two of the three principle threats to native populations. The project should be designed in such a fashion as to minimize habitat fragmentation. These measures could include placing access roads along forest edges and collocating facility infrastructure as much as possible.

#### *2.7.2.2.2 Potentially Significant Adverse Impacts-Operation-Wildlife and Wildlife Habitats*

This section should include a more specific discussion of expected and potential impacts to birds and bats at this site. The lakeshore location may elevate the collision risk to nocturnal migrants. Should turbines be placed in the large areas of grassland



habitat found in portions of the project area, there may direct and indirect impacts to grassland-dependent birds, including state listed species that have been documented on site. The potential for federally threatened northern long-eared bat to be impacted by this project should also be discussed.

#### 2.7.2.3 Wetlands

Based on review of the Project boundary, there is potential for DEC regulated wetlands to be impacted by the Project. However, since the DEC has not been given the opportunity to review the Project's wetland delineation study and the exact locations of the turbines have not yet been identified, more detail regarding the Project layout in relation to delineated wetlands is necessary to determine, with certainty, if the Project would directly impact DEC regulated wetlands, 100 ft. adjacent areas and streams. If the Project is determined to impact any DEC regulated wetlands (including "unmapped wetlands" that meet DEC jurisdictional criteria but have not yet been formally mapped), 100 foot adjacent areas and streams, the Applicant must meet permit standards established by Environmental Conservation Law (ECL) Article 24, Freshwater Wetlands. Further, if a United States Army Corp. (ACOE) authorization is required for the Project, a Clean Water Act Section 401 Water Quality Certification must also be issued by DEC.

As project layout to include turbine locations, access and collection line placement, and lay down areas, is made available, the application should work closely with DEC regional wetland experts to ensure that impacts are avoided – when possible – and minimized when they cannot be avoided.

If unavoidable wetland impacts are expected to result from Project construction activities, a discussion of compensatory mitigation being considered must be included. Proposed mitigation should conform to DEC wetland mitigation guidelines, Freshwater Wetlands Regulation Guidelines on Compensatory Mitigation, available at: [www.dec.ny.gov/docs/wildlife\\_pdf/wetmitgdln.pdf](http://www.dec.ny.gov/docs/wildlife_pdf/wetmitgdln.pdf).

#### 2.7.3.2 Extent and Quality of Information Required-Wildlife and Wildlife Habitat

This section states that the results of on-going field surveys "will be sufficient to identify and evaluate expected impacts to birds and bats, analyze known or predicted species and species migration corridors present, determine effective impact avoidance, (and) minimization and mitigation measures". DEC does not wholly concur with this statement, and would like to clarify that until the location of turbines, access roads, collection lines, transmission lines, and all other project components are known, and all bird and bat study reports have been received and reviewed, the agency reserves the right to request further field studies or changes in project layout if study results indicate adverse impacts to listed or sensitive species are likely as a result of construction and



operation of the project. Additionally, a post-construction wildlife monitoring plan should be in place prior to the start of project operation.

*2.7.4.2 Avoidance and Minimization of Adverse Impacts-Wildlife and Wildlife Habitat*

DEC generally agrees that the measures outlined in this section to avoid impacts to wildlife and their habitats should all be implemented by the Applicant. As state-listed species have been documented on site by DEC and the applicant, DEC recommends all turbines and other project components be located outside of the fields and other habitats known to be occupied by the short-eared owl, northern harrier, and bald eagle. The statement that "project components will be sited to minimize impacts on wildlife to the maximum extent practicable" cannot be evaluated at this time, as no information has been provided to DEC on the layout of the project.

A request to DEC's Natural Heritage Program for information on the potential occurrences of listed and sensitive species and natural communities in or near the project area should be made, and a response received dated within the past 12 months. If construction or operation of the Project will result in an impact to federal or state-listed endangered or threatened species, the Project must conform to the requirements of ECL Article 11. Since the locations of the turbines have not been identified to date, further work will be necessary to determine if ECL Article 11 requirements are applicable. Also, to determine ECL Article 11 applicability, specific information should be provided regarding the time frame, number, and types of surveys conducted for DEC review.

*2.7.5.2 Proposed Measure to Mitigate Unavoidable Impacts-Wildlife and Wildlife Habitat*

Developing and implementing a post-construction fatality monitoring program is not considered mitigation for unavoidable impacts, as it can only monitor impacts. In addition to fatality monitoring, the post-construction plan should also include bird displacement/habituation surveys. The Applicant should consider such measures as operational curtailment during certain times of year and under certain conditions to reduce direct mortality of bats, as well as strike deterrents and detectors deployed on turbines.

Appendix B Avian and Bat Study Plan for the Proposed Lighthouse Wind Project, May 22, 2015

This document should be updated to indicate that winter grassland raptor surveys will occur until March 2016, and will be extended until April 2016 if any listed species are observed on last survey in March.

DEC requests a mid-season summary report be submitted in early February 2016 on the winter raptor survey results to date. A final report discussing the results of the entire 2015-2016 winter survey season should be submitted after completion in April 2016. This report should contain all locations, time, and duration of observations, flights paths, and behaviors of all listed species encountered.

## 2.8 Water Resources and Aquatic Ecology

### *2.8.1.2.1. Watershed*

If DEC regulated streams are impacted, the Project must meet standards established by ECL Article 15 (Protection of Waters) unless directional drilling is used to avoid all disturbance to the bed or banks of protected streams. Given the early stage of this Project and the non-specific nature of the maps, the assessment of whether the Project conforms to ECL Article 15 requirements will require further study. Also, more detail needs to be provided by the Applicant regarding any stream segment for which a crossing or disturbance is proposed, to determine if the waterway meets the New York State definition of "navigable." If a stream segment proposed to be disturbed includes lakes, rivers and other waterways and water bodies on which water vessels with a capacity of one or more persons are operated or can be operated, conformance with ECL Article 15 will also be required. An ECL Art 15 permit issued for project construction may contain conditions that prohibit in stream work during fish spawning periods and these periods must be considered when scheduling construction.

Stream crossings should be designed with the goal of protecting stream continuity, as described in the DEC web page, Stream Crossings: Guidelines and Best Management Practices, available at: [www.dec.ny.gov/permits/49066.html](http://www.dec.ny.gov/permits/49066.html). All crossings of class C(T) or higher streams should be completed using temporary or permanent crossing structures. Driving equipment directly through the stream would not be permitted.

In addition to the protected streams classified as C(T) or higher and portions of C streams which are navigable, the potential impacts to other C streams (primarily Golden Hill Creek) should be avoided/minimized to the extent possible. Regional staff has made recent efforts to have Golden Hill Creek upgraded to C(T), because the stream does receive seasonal runs of salmonids, primarily steelhead. The paperwork for reclassification has been submitted to Albany Bureau of Habitat.

Golden Hill Creek is not a low quality resource – contrary to 2.8.1.2.1. Watershed (pg. 56) - 2nd Paragraph. The line "Aquatic life support and recreational uses (fishing) in Golden Hill Creek are impaired by unknown pollutants. Organic wastes are the suspected cause though other factors may also contribute" is incorrectly referenced as



NYSDEC, 2015d. Lake Ontario/Twelve Mile Creek Watershed Assessment ([http://www.dec.ny.gov/docs/water\\_pdf/wilkontwtwelvevile.pdf](http://www.dec.ny.gov/docs/water_pdf/wilkontwtwelvevile.pdf)).

The actual source of this line (cited above) is Lake Ontario/Golden Hill Creek Watershed Assessment [http://www.dec.ny.gov/docs/water\\_pdf/wilkontwgoldenhillcr.pdf](http://www.dec.ny.gov/docs/water_pdf/wilkontwgoldenhillcr.pdf) which was based on a biological assessment 16 years ago. This Golden Hill Creek assessment document also states that a fish kill earlier that year (March 2000) from chlorine discharge may have had residual effects on macroinvertebrate fauna. A biological assessment from 2000 (same year as a fish kill from a chlorine discharge) should not be used to determine that aquatic life and recreation (fishing) in Golden Hill Creek are currently impaired.

On the contrary, Golden Hill Creek and Estuary currently support a variety of quality fishing opportunities. In early spring, there is very good yellow perch and bullhead fishing in the harbor/estuary section. Also in spring, there is a significant run of steelhead (rainbow trout) well up into the creek. If flow rates are adequate in the fall, salmon and brown trout will also run the creek. As project layout to include turbine locations, access and collection line placement, and lay down areas, is made available, the application should work closely with DEC regional stream experts to ensure that impacts are avoided – when possible – and minimized when they cannot be avoided.

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If you have any questions or concerns, you may contact me by phone at (518) 402-9150, or by email at [Rudyard.edick@dec.ny.gov](mailto:Rudyard.edick@dec.ny.gov).

Sincerely,

RE

Rudyard Edick

c: Mr. Dan Fitzgerald, Senior Development Manager  
([danfitzgerald@apexcleanenergy.com](mailto:danfitzgerald@apexcleanenergy.com))  
Service List