

New York State Department of Environmental Conservation

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Alexander B. Grannis
Commissioner

RECEIVED MAY - 8 2010

April 30, 2010

Town of Allegany Planning Board
Town Hall
52 West Main Street
Allegany, New York 14706

Re: State Environmental Quality Review (SEQR)
Allegany Wind Power Project
Town of Allegany, Cattaraugus County

Dear Town of Allegany Planning Board:

The New York State Department of Environmental Conservation (DEC) has reviewed the Draft Environmental Impact Statement (DEIS) for the proposed Allegany Wind Power Project, Town of Allegany, Cattaraugus County, New York, February 2010, prepared by Environmental Design and Research (EDR) P.C.

The project sponsor, Allegany Wind, LLC (a subsidiary of EverPower Renewables), proposes construction and operation of a maximum capacity 72.5 megawatt (MW) wind power project consisting of up to 29 Nordex N100 wind turbine (or equivalent), each with a rated capacity of 2.5 MW, over a project area of 9,119 acres. The project area includes two parallel ridges on either side of Chipmunk Road. Each WTG, though the manufacturer is yet to be finalized and will be subject to availability, will have total height of approximately 492 feet (including hub height and tip of rotor blade). In addition to the wind turbines, the project will involve construction of two permanent 80-meter meteorological towers, an operations and maintenance (O&M) facility up to 2.5 acre in size, 8.2 miles of access roads, approximately 10.7 miles of buried electrical interconnect lines, a collection station and an interconnection substation, a 6.4 mile long buried transmission line, and a staging area up to five acres in size. The applicant's intention is to construct the project in one continuous phase in the calendar year 2011.

The DEC comments will be presented in the following sections to include: 1) wetlands impacts; 2) surface water impacts; 3) spill prevention, control and countermeasures 4) wildlife impacts; and 5) noise impacts.

Wetlands.

General Issues.

Projects that propose to disturb regulated wetland areas, buffer areas and protected streams require permits from DEC and the U.S. Army Corps of Engineers (USACE). DEC wetland permit regulations at 6 NYCRR 663.2(z) define a "regulated activity" as any form of draining, dredging, excavation, or mining, either directly or indirectly; any form of dumping, clear cutting or filling, either directly or indirectly; erecting any structures, constructing roads, driving pilings, or placing any other obstructions whether or not changing the ebb and flow of the water; any form of pollution, including but not limited to installing a septic tank, running a sewer outfall, discharging sewage treatment effluent or other liquefied wastes into or so as to drain into a wetland; or any other activity which substantially impairs any of the several functions or benefits of wetlands which are set forth in section 24-0105 of the (Freshwater Wetlands) Act. These activities are subject to regulation whether or not they occur upon the wetland itself, if they impinge upon or otherwise substantially affect the wetland and are located within the adjacent area.

Before DEC can consider a permit application, wetland delineations prepared for the project must be verified by agency staff. DEC jurisdiction and resulting acreage impacts may vary based on DEC verification of wetland delineations. It is DEC policy that wetland impacts are not permitted, even with mitigation, until other alternatives have been explored, including avoidance, minimization or reduction of impacts. Generally applicants are required to: 1) Examine alternative project designs that avoid and reduce impacts to wetlands; 2) Develop plans to create or improve wetlands or wetland functions to compensate for unavoidable impacts to wetlands; 3) Demonstrate overriding economic and social needs for the project that outweigh the environmental costs of impacts on the wetlands.

The DEC guidance document, *Freshwater Wetlands Regulation Guidelines on Compensatory Mitigation*, October 26, 1993, states that "Temporary disturbances, where pre-construction conditions are essentially restored, for example when laying a pipeline, do not require *compensatory* mitigation since there is no permanent loss. However, impacts to the wetland still must be first avoided and then minimized as with any other project, and efforts to reduce disturbances during construction, such as erosion control, will still be required." USACE defines "permanent" impacts as the loss of waters of the United States, and includes the area where fill is placed plus areas that are adversely affected by flooding, excavation or drainage as a result of a project. Where the project area is restored to pre-construction contours and elevation, it is not included in the calculation of permanent loss of waters (permanent impacts). This includes temporary construction mats (e.g. timber, steel, geotextile) used during construction activities and removed upon the completion of the work. However, where certain functions and

values of waters of the United States are permanently adversely affected (such as the conversion of a forested wetland to an herbaceous one in a permanently maintained utility right-of-way), USACE requires mitigation to reduce the adverse effects of the project to the minimal level. The wetlands analysis in the DEIS should be refined to apply the full range of potential impact criteria to the proposed construction activity in the determination of total area of permanent impact; not just those areas proposed for permanent placement of fill. This is necessary to quantify the total affected area for permitting and requirements for mitigation.

Simple re-grading to pre-construction contours following excavation in a wetland area may not be enough to restore the full function of the existing wetland area. Any clearing or grading that disturbs wetland soils can result in permanent impacts to wetlands. Grading a wetland or adjacent area can substantially alter surface water drainage and flow patterns, may temporarily increase erosion, and may eliminate fish and wildlife habitat. Clear-cutting removes the vegetative cover of wetlands and may reduce their ability to absorb water and serve as habitat, and can also cause soil erosion. Dredging or excavation may increase water depth and remove wetland vegetation, thus altering the basic characteristics of, and perhaps destroying, wetlands. Fish and wildlife feeding or reproductive capacities may be altered, as may cover types, turbidity, sediment deposition, and erosion patterns. Clearing vegetation and any form of soil disturbance can lead to the introduction of invasive plants. Any of these activities can cause the permanent loss of benefits provided by wetlands and may, in fact, destroy wetlands entirely.

Specific Issues

Freshwater Wetlands

Section 3.2.1.2.1 states that "Review of NYSDEC mapping indicates that while there are no wetlands or adjacent areas (wetland buffers) within the Project Site (generating site or along the transmission line), there are several wetlands located within the river valleys in the vicinity of the Project Site that are regulated under Article 24 of the Environmental Conservation Law."

NYSDEC review concurs that there are no mapped State-regulated wetlands or their associated 100-foot adjacent areas directly impacted by this proposed project. In the event that the project area is modified, this would have to be re-evaluated.

The state regulated wetlands in the vicinity of the Project Site are not expected to be directly impacted based on the information provided, as long as there is adequate erosion and sedimentation control.

Clarification is needed on page 54 where stated "Based upon the current Project layout, it is anticipated that there will be no permanent impacts to wetlands/streams, including NYSDEC regulated wetlands, within the generating site or along the buried transmission route. **All wetland impacts along the buried transmission line will be temporary and upon completion of construction, impacted areas will be restored and allowed to regenerate naturally.** (emphasis added)." DEC may require seeding of a cover crop in disturbed wetland areas to prevent establishment of invasives. It is previously stated that there are no impacts to State

regulated wetlands or adjacent areas, but this statement implies that the impacts along the transmission route may include State wetland impacts. Please clarify whether this is intended to mean impacts to Federally regulated wetlands only.

Page 3: There is no mention of wetlands in the environmental impacts table, nor forest fragmentation specifically.

Page 4: Reference to 1.7 acres of temporary wetland disturbance, but no details are given. It should be explicitly stated that this is regarding wetlands under Federal jurisdiction only.

Page 34: Table 3 should include NYSDEC Article 24 Permit is for impacts to wetlands and 100-foot adjacent area

Page 46: States no mapped wetlands. However, wetlands of greater than 12.4 acres may be unmapped but still present on the project site. Were any unmapped wetlands found on the site? Was there a search for such wetlands?

Page 47: Impacts from buried 115kV line. Again, please verify this is only impacts to Federally regulated wetlands.

Page 54: Transmission line is 100 foot wide. If route needs to be maintained by periodically cutting vegetation to prevent woody growth, then it is a permanent disturbance resulting from wetland conversion rather than a temporary impact.

Page 56: No permanent impacts = no mitigation. Not entirely true. As stated above we may require mitigative measures to prevent introduction of invasives and assure wetland vegetation re-establishment. But, such changes may have permanent impacts as noted in the comment above.

Forest Fragmentation

Forest fragmentation is a major concern. While effort has been made to use existing logging and oil/gas well roads and other existing fragmentations, there is still a great deal of forest that will be cleared (and thus further fragmented) as a result of this project. In fact, it appears that as many as one-third to one-half of the turbines will result in additional forest fragmentation. The impacts on wildlife habitat, forest health, etc. should be minimized by a project design that would result in as little forest clearing as feasible.

Invasive Species

As stated in the SEQR letter dated October 6, 2008, "The control of invasive species to minimize the spread of invasive propagules throughout the project development area, and particularly in regulated wetland and stream areas, should be discussed in the DEIS. The

discussion should include measures to ensure no net increase in the areal coverage of invasive species in the project development area. Post-construction monitoring and periodic management, including invasives control and re-planting of preferred indigenous species to ensure survival should also be included in the discussion. A satisfactory Invasive Species Control Plan will be a requirement of any permits issued by DEC."

While the concern for invasive species is mentioned in the DEIS, there does not appear to be any thorough discussion of how invasive species management will be carried out, either to prevent establishment, monitor for introductions and/or spread, or control if discovered. An Invasive Species Control Plan must be developed and more detail must be given as to how invasive species impacts will be minimized or prevented.

Surface Water

The following guidance pertains to work involving the crossing of water bodies and work in close proximity to regulated streams as well as culvert design.

- 1) If work occurs within 50' of the top of a bank of a DEC classified C(t) or C(ts) stream, erosion control planning will be necessary. This should be part of the storm water management plan for the site.
- 2) All underground collection lines and culvert crossings shall be done in the dry.
- 3) All work is prohibited in a protected trout stream from 15 October through 31 May.
- 4) Siltation prevention measures shall be installed and maintained during the project to prevent movement of silt and turbid waters from the project site and into any watercourse, stream, water body or wetland.
- 5) Before trenching through stream banks, upland sections of the trench shall be backfilled or plugged to prevent drainage of possible trench water into the stream.
- 6) Underground collection lines and culvert installations shall be done in one operation without any delay between construction phases.
- 7) All permanent culverts crossings shall be entrenched a minimum of 1 foot below bed elevation.
- 8) All permanent culvert crossings shall be designed to meet a 25 year flood event. This can be accomplished either by conveying the flood entirely through the culvert or w/ an overflow spillway that directs the water immediately back to the stream.
- 9) All permanent culverts and culverts in longer than 60 days shall have a rocked headwall and a downstream splash apron extending 3 times the culvert diameter to prevent erosion. Rock size should be of an even mix from 6 to 18 inches in diameter.

- 10) Care must be taken to design and build culverts correctly – particularly when it involves crossing a navigable water body or a state regulated stream. Please see our website for an overview on proper culvert design: <http://www.dec.ny.gov/permits/49060.html>. The particular details of culvert design must be worked out in consultation with the DEC and must address concerns such as 25 year flood event design, maintaining channel geometry, proper use of rip rap, cofferdam specifications, work in the dry, culvert slope, etc.

Necessary Plans for Development

Spill Prevention, Control, and Countermeasures Plan (SPCC).

Due to possible construction impacts from heavy equipment use (such as large cranes) and the need to move much soil and concrete over rugged terrain, hydraulic and diesel fuel spills are a distinct possibility. And during operation, spills are also a possibility due to the number of wind turbine generators and large electrical transformers. A Spill Prevention, Control and Countermeasures Plan will be required for any permit issued by the DEC. Measures to prevent, contain, and cleanup spills should be discussed in the Final Environmental Impact Assessment Statement.

Wildlife Impacts

Potential Impacts Section 3.3.2

In Section 3.3.2.1.1 “Construction-Vegetation”, the DEC noted the following concerns. An invasive species management plan should be developed to describe measures the project sponsor will take to minimize the introduction, spread, and establishment of invasive species within the project area. A table similar to Table 8 should be included describing the amount of each habitat type within the project area that will be lost and altered on a temporary and permanent basis as a result of construction, operation, and maintenance of the project.

In Section 3.3.2.2.1 “Operation-Vegetation”, the DEC noted the following issues. Although the DEIS discusses some of the impacts to forested habitat, and the shrub/scrub or grassland areas that may result from forest clearing that could be utilized by species dependent on those habitat types, DEC considers the conversion of forest cover to another type of habitat as a loss of forest habitat. Even if the forest is “allowed to regenerate naturally”, it would not become mature forest for decades, and therefore the disturbed area would not be utilized by forest-dependent species during the life of the project, and should be considered a permanent loss of forested habitat. An estimate of total forest acreage permanently lost should include all areas of forest disturbed or cleared for construction of project components, and the area of forest converted to another habitat type.

3.3.3 Proposed Mitigation

Section 3.3.3.2 "Fish and Wildlife" discusses aspects of the project designed to minimize impacts to birds, and states that "the Project is not anticipated to have an undue adverse impact on birds or bats, and therefore no mitigation is required." A post-construction bird and bat monitoring study will be required which includes mortality searches, bias correction testing, bat monitoring, and potential mitigation options. Upon reviewing the results of such studies, DEC may recommend mitigation for impacts to birds and bats that could include operational changes (altering the turbine cut-in speed, changes in daily or seasonal timing of operation, etc.), easement purchase/management, and/or removal or relocation of various offending project components.

Breeding Bird Surveys, 2007 and 2008

It is stated in the discussion of both the 2007 and 2008 reports that, other than one cerulean warbler in 2007, "no other species of concern were observed during surveys, which may indicate that the disturbed nature of the Project area does not provide quality habitat for forest interior species." However, 3 of the species observed in the greatest numbers and with the highest relative abundance and frequencies (ovenbird, black-throated green warbler, and red-eyed vireo) are all dependent on intact forest interior habitat. Though not listed as species of concern, the presence of these birds throughout the project area during both years of survey suggests that quality forest interior habitat does indeed exist within the project area. The degree to which these and other forest-dependent species will be displaced or otherwise impacted by forest clearing, noise, movement, collision, and other associated effects of turbines is currently unknown.

The entire western part of the project is within the Allegany Forest Tract IBA, including proposed turbines 1W-11W. The IBA boundary was expanded in 2008 to include a portion of the project area. Some species not typically found in New York were detected during the 2007 and 2008 surveys, including blue grosbeak and summer tanager. It was not stated in the reports whether these birds were observed west of Chipmunk Creek (within the IBA), or to the east of the creek (outside the IBA). The DEIS should include a map indicating the current IBA boundary relative to the proposed project area and turbine locations.

The project sponsor should coordinate with DEC to develop an appropriate protocol for post-construction surveys that include mortality searches, acoustical bat monitoring, and breeding bird surveys.

Endangered and Threatened Species.

The DEC's Natural Heritage Inventory Program reveals no listed animal species within the proposed project area. One plant species, Appalachian Shoestring Fern (*Vittaria Appalachianiana*), is present. Impacts on this species need to be discussed further with our technical staff.

Although not indicated on the Natural Heritage Inventory maps there is some information available on the possible breeding of a listed "special concern" bird species within the project area. This species Cerulean Warbler, (*Dendroica cerulea*) was detected by the Allegany Wind Project consultants during a June, 2007 breeding bird survey of the project area. In addition the Second Atlas of Breeding Birds in New York State indicates that Cerulean Warbler was a possible breeder in BBA Block 1966C which is a block immediately west of the project. This species is a bird of large intact forests and is very sensitive to forest fragmentation. If it is present on the project site the increased forest fragmentation resulting from the construction of the towers and connection lines would likely have negative impacts on Cerulean Warblers using the project area as habitat. The Allegany State Park and Vicinity Population of Cerulean Warblers is one of the most significant populations of this species in New York. The number of blocks reporting Cerulean Warblers within the Appalachian Plateau declined by 17% from the first atlas to the second and most recent atlas.

Although no other endangered, threatened or listed animal species are shown in the Natural Heritage Inventory new information on the presence of such species may become available in the future and possibly during the planning and construction of the Allegany Wind Power Project. At such time protection of such species and their associated habitats may be required by this Department

Noise

On Proper Determination of Ambient Levels.

The NYS DEC policy document, "Assessing and Mitigating Noise Impacts" places stress on reducing impacts above background levels. And this is emphasized in the DEIS. Moreover, the applicant employs the more conservative L90 metric in the analysis which is to be commended. As determining the impact of the proposed wind farm on the local community depends on accurately determining existing background levels, an analysis should carefully justify the number of chosen background sampling points, their specific location, and any factors which may have an influence on the respective result.

Number and Location of Background Sampling Points

As the project area spans over 9,000 acres, the background analysis should include a justification for the number of sampling locations chosen based on statistical analysis of what would be representative of such a large area. In a rough fashion, the clusters of home possibly effected by the wind project in terms of noise would include, clockwise from the north: 1) homes along Upper Birch Road; 2) homes in the proximity of Boulder Ridge Road; 3) homes along Geiger Hollow Road; 4) homes near the intersection of Bucher Hollow Road; 5) homes near the intersection of Knapp Creek Road; 6) homes in Nichols Run; 7) homes in Harrisburg; 8) homes in the west along Nichols Run near the intersection of Quinn Road; 9) homes in the proximity of Chipmunk. Of these, 2), 3), 5), 6), 7), and 8) would appear to be closest (though topography needs to be considered and proximity may not be perfectly indicative of effect). Moreover, homes in the vicinity of Geiger Hollow Road and west along Nichols Run near the intersection of Quinn Road have no representation in background analysis. For a project spanning such a large area, the background analysis should include discussion of the following question – do we have enough data to characterize the background in the area of each cluster of homes? Moreover, additional background analysis points may be called for given the nearly 20 dBA divergence between readings that occasionally occurred at the same time between background points. Also, it may be advised to analyze each identifiable cluster of homes which could be affected and present the respective existing background levels along with potential impacts from the wind project. While Plot 1 does make considerable steps towards addressing this question, a closer look at the home clusters within the anticipated 40dBA line or in close proximity to it would be helpful in better characterizing potential community impacts.

Potential Confounding Factors Influencing Background Levels

The DEC recommends a more detailed discussion of 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 including brook noise as discussed by the applicant. Background 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.

Given that the majority of the background sampling points were in close proximity to roads, more so than nearby homes, some discussion of this influence, as well as other activities in the nearby area, should be discussed. For example, do nearby residents use tractors or ATVs? How heavy is the car and truck traffic on the nearby road? While stream noise is natural in the vicinity of many of the homes, the fact that the work was done in the Spring during greatest flow may raise some

questions of how representative the background would be over the course of the entire year.

Moreover, while pictures were provided from two perspectives, it would be preferable to have photos to cover a 360 degree view, or at least multiple vantage points. Furthermore, it should be kept in mind that some (possibly many) residences may be in relatively wind sheltered locations while still being within a reasonable distance of the turbines. If this is the case, and background survey locations do not reflect this, the difference between background and wind turbine generator sound levels may be greater than anticipated.

On the Nature of Sound Characteristic of Wind Turbines

Appendix N, Environmental Sound Survey, discusses that sound from wind turbines as unsteady and variable and periodic thus can be discerned at larger distances than if it were continuous (page 26). The characteristic of the sound generated is important in considering its impact on the public (as discussed in our guidelines). As wind turbine generator noise is characterized by amplitude modulation (whooshing, for example), this should be considered in the analysis as some studies have shown amplitude modulation as an annoyance factor for the public. In this light, per the "Factors to Consider" section (under "Evaluation of Sound Characteristics") of the DEC guidelines, it may be advisable to add a calculated number of dBA to the generated sound in an attempt to compensate for this characteristic.

On Need to Consider Nighttime Impacts.

As our guidelines discuss (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 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 as an supplemental means to assess possible effects on local residents. As stated in our guidelines:

"...Equivalent Sound Level (Leq) can be combined with other types of noise analyses such as Composite Noise Rating, Community Noise Equivalent Level and daynight noise levels characterized by Ldn where an Leq(24) is measured and 10 dBA 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."

However, care should be taken that this approach not substitute for analysis involving short term worse case analysis – such as worse case 10 minute nighttime sound pressure level.

Moreover, while the analysis does assume atmospheric stability according to Mr. Hessler, a Swedish study does indicate ("Human Response to Wind Turbine Noise", Eja Pedersen, Goteborgs Universitet, 2007) that an additional complicating factor may be at play: wind velocity may be nearly double that anticipated at hub height during nighttime stable atmospheric conditions. Thus resultant sound levels might be much higher than anticipated relative to background. In any case, whether this proves to be an issue or not, care should be taken to compare likely lower background noise levels at night and consequent possible higher spreads between background and wind turbine generated sound at a time when annoyance may be the greatest. Stable atmospheric conditions at night when the difference between ground level wind and hub height wind speeds may be most pronounced should be carefully examined.

On Need to More Closely Examine Point Source Assumption and In Phase Generation.

The sound study provided by the applicant assumes that wind turbine generators (WTG) will act as a point source in generating sound. However, as WTG are commonly configured in a line, noise may not drop off as quickly as possibly assumed. It is not clear if this consideration is examined.

Furthermore, particularly at night, wind speeds may be relatively uniform and thus a synchronicity in the sound from various WTGs may result in an unexpected additive effect from an "in phase" generation of sound from the various WTGs. This is particularly the case since WTG blades are at most 60 degrees out of phase.

On Need to Consider Error Margins.

Error is a component of any study. Some discussion is encouraged to focus on the likely degree of measurement and model error. An analysis should be included in the Final Environmental Impact Assessment to ensure that the results are not in danger of underestimating possible impacts. One possible source of error to discuss is the fact that sampling represented only several days and this may not represent atmospheric conditions common over the course of a year.

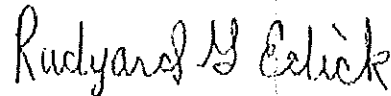
Cultural Resources.

Per New York State Office of Parks, Recreation, and Historic Preservation the proposed windpark will have an adverse impact on culture resources within the Area of Potential Impact surveyed. Consequently, the project sponsor must work in consultation with OPRHP to pursue feasible and prudent plans that avoid or mitigate the adverse impacts. The DEIS includes a discussion of cultural resources in the project area and the Area of Potential Effect (APE) for visual impacts to historic resources as well as possible mitigation actions.

According to correspondence this month with OPRHP, they have not received any submissions from Allegany Wind LLC or its representatives since 2008. Please ensure OPRHP is in receipt of your recent work.

In conclusion, DEC appreciates the opportunity to comment on the DEIS for this project. We look forward to continuing to work with the Town of Allegany as Lead Agency throughout the remainder of the SEQR and permit review processes. If you have any questions or comments, please contact me at (518) 402.9150.

Sincerely,



Rudyard G. Edick
Project Manager

cc: Allegany Wind LLC
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