

November 28, 2005

Mr. James Sherron
Executive Director
Steuben County Industrial Development Agency
P.O. Box 393
Bath, NY 14810-0393

Dear Mr. Sherron:

The U.S. Fish and Wildlife Service (Service) has reviewed the Draft Generic Environmental Impact Statement (DEIS) for the proposed Ecogen, LLC Prattsburgh Wind Project in the Town of Prattsburgh, Steuben County, and the Town of Italy, Yates County, New York.

The Steuben County Industrial Development Agency (IDA), as lead agency in the State Environmental Quality Review Act (SEQRA) process, is considering potential impacts from construction of 53 wind energy turbines which would generate approximately 79 megawatts of power. Turbine structures are anticipated to be approximately 389 feet tall from the ground to the highest blade tip. Structures such as a substation, 4.8 miles of buried cable, an unspecified amount of overhead transmission lines, and 3.4 miles of access roads must also be built in the 33,000-acre project area. This project is situated at the southern end of the Finger Lakes, near the New York State Department of Environmental Conservation (NYSDEC) Hi Tor Wildlife Management Area, the Hi Tor Bird Conservation Area, and generally along a north-south oriented ridge.

Our review and comments are being provided under the SEQRA process. We may provide future comments pursuant to the Migratory Bird Treaty Act (40 Stat. 755; 16 U.S.C. 703-712) (MBTA), the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d), or the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), as applicable. The Service previously provided general comments to the project sponsor in letters dated December 29, 2004, and May 6, 2004. It should be noted that as of June 16, 2005, data from a spring 2005 avian radar study were not available, therefore, we expect to provide additional comments on this project.

The following represents our comments on the text of the document, in order of appearance in the document:

Section 1.0 – It is explained in this section the need and benefits of the proposed project. Certainly, wind generated electricity does not result in fossil fuel emissions (except during the manufacturing of parts, transport, and construction of turbines). The premise for constructing

this project is that environmental benefits will be realized in the form of reduced air pollutant emissions, greater energy security, and reduced electricity costs (also described in Section 4.2.5 Alternative Technologies). However, this document has not shown that air emissions will be reduced. We know of no plans by electric utility companies in New York State to close an existing fossil fuel generating plant or forgo construction of a new generating facility because of wind turbine projects proposed in this region. If this information is available, please inform us.

Due to the intermittent and seasonal (usually highest wind speeds are in winter) nature of wind in most locations, electricity will not be generated effectively when it is needed the most (summer). Also, relying on an intermittent source of electricity may not provide greater energy security. Finally, the document indicates that wind is a cheap source of electricity but on page 3-100 it is stated that due to the volatility of the energy market, it is not possible to predict electricity prices. While we do believe that there will be an environmental benefit from the project in the form of electricity generation without harmful generation emissions, this benefit needs to be put in proper context.

A description is provided of anticipated turbine lighting which would require approval from the Federal Aviation Administration (FAA). The text indicates that approximately one half of the 53 turbines are expected to be lit with L-864 red strobe-like aviation warning lights. It has been well documented that tall, lit structures pose a threat to birds, especially during inclement weather (Towerkill.com 2005). It is important to point out that the duration and type of lighting can influence avian mortality. Several studies have indicated that strobe lights can reduce avian attraction during inclement weather when compared to incandescent lights. Recently, FAA has agreed that medium intensity white strobe lights are preferable to red flashing or strobe lights to provide aviation safety and protect birds on all new towers (Manville, pers. comm.). In addition, the FAA may consider tower lighting on only the perimeter structures, where appropriate. We encourage the project sponsor to investigate this issue with the FAA and incorporate any lighting changes into the project design, as appropriate. In addition, the meteorological tower proposed for the project is a lattice structure which may encourage bird perching or nesting. We recommend that a monopole structure be used instead to eliminate the possibility of perching and nesting on the tower.

We note that the document does not provide an estimate of the quantity of overhead transmission cables to be used in the project area. Overhead lines can cause substantial avian and bat mortality (Avery 1978). Millions of birds are believed to be killed each year by these structures; therefore, the quantity to be used for this project and associated potential impacts to birds and bats should be reported in the EIS.

Section 2.0 – This section of the DEIS describes the environmental setting of the project area. However, only one paragraph is provided to portray freshwater wetlands found in the 33,000-acre study area. It is not clear from the information provided if a wetland delineation was performed or how it can be determined at this point that wetland impacts will be minor. Likewise, it was not disclosed what function and values the project area wetlands provide. This information should be included in the EIS.

We found no discussion of the indigenous plant species and vegetation communities found in the project area, although some discussion is found in other sections of the document. Likewise, there is no discussion of aquatic and terrestrial organisms found in the study area. We would expect the environmental setting section of the document to provide sufficient information on area biota and habitat conditions which would allow for a clear understanding of the project area.

Section 3.0 – Currently, it is unknown to what extent project features will impact freshwater wetlands or other surface water bodies such as intermittent and perennial streams. Although the DEIS indicates that impacts are believed to be minor, the locations of turbines are still being determined and, therefore, surface water impacts have not been calculated. While we understand the locations of the turbines will be on upland areas, construction work for the 3.4 miles of access roads and 4.8 miles of buried cable have the potential for substantial wetland involvement. Several aspects of the project are still in the planning phase such as road and intersection upgrades and culvert replacements. Appendix I indicates that at least 14 roadway areas must be improved and 11 culverts replaced to accommodate the transport of construction equipment. While some work may involve temporary impacts, this information should be factored into the assessment of the project. We suggest that an adequate wetland delineation be conducted and confirmed by staff of the U.S. Army Corps of Engineers along with an assessment of site wetland functions. This information should be compared to the current project design to provide at least a preliminary estimate of wetland impacts, both temporary and permanent. This information should be provided in the EIS.

In Section 3.3.1.1, it is indicated that the timber rattlesnake (*Crotalus horridus*) is a Federally-listed threatened species. That is incorrect, as this species is not listed under the Endangered Species Act, but rather is protected as a State-listed species. The Service has reviewed this proposed project and the information provided regarding Federally-listed endangered or threatened species, and our review was coordinated with the New York State Department of Environmental Conservation (NYSDEC). The comments provided in our December 29, 2004, letter (copy enclosed) regarding endangered or threatened species remain applicable.

Sources of existing avian information are described in Section 3.3.1.1.1 including bird banding data, Breeding Bird Atlas data, and Christmas bird count (CBC) records. Table 3.3-1 provides a list of New York State Endangered and Threatened Species and Species of Special Concern and the occurrence of each species in the project area. It is not clear if the Breeding Bird Atlas was the sole source of information for this table. The source(s) of information should be provided.

Data from Christmas bird counts was only available for Corning, located about 25 miles south of the project site. The text incorrectly assumes that because of the proximity of Corning to the project area, that habitat and wintering bird species will be similar. However, the text does not provide a description of the habitat where the Christmas bird counts were conducted or a comparison of habitat conditions in the two areas. Without this information, it would be conjecture to assume that the species found in the two areas would be similar. Corning is located within the Chemung River Valley, whereas the project site is located in the Finger Lakes Highlands portion of the Appalachian Plateau.

On page 3-15, the text indicates that species such as waterfowl, gulls (*Larus* sp.), and bald eagles (*Haliaeetus leucocephalus*) observed in Corning CBCs would not be expected to occur in the project area. However, on the previous page, the text indicates that NYSDEC has confirmed that significant over-wintering waterfowl concentration occurs adjacent to the project site. While information from sources such as CBC may be informative, it is secondary to actual data collected at the project site. In our December 29, 2004, letter to Ecogen, we recommended that surveys be conducted during all seasons to determine avian use of the project site. Also, in our May 6, 2004, letter to the IDA on the Draft Public Scoping Document, we stated “Winter field surveys may be applicable to this site due to the seasonal use of the area by species such as

short-eared owls (*Asio flammeus*), a State-listed endangered species.” We again recommend that additional data be collected which documents avian use during all seasons of the year.

The timber rattlesnake, on page 3-19, is again listed as a Federally-threatened species under the Endangered Species Act. As previously mentioned, this species is not a Federally-listed species but rather is a State-listed threatened species.

In section 3.3.1.2.1, the various plant communities found in the project area are listed and described. However, there is no estimate of impact to each habitat type. In other sections of the document, it is estimated that approximately 75 acres of land will be disturbed by the project. We suggest that the text be revised to provide the acreage of each habitat type impacted by the construction of project features including turbine sites, staging areas, access roads, transmission lines, culvert and road upgrades, and any activity requiring earth disturbance or vegetation clearing. This basic information is necessary to understand the scope of habitat disturbance. As previously mentioned, all work in streams and wetlands, both temporary and permanent, should be identified in the text as well.

Avian studies conducted in the project area are discussed in section 3.3.1.3. It is indicated that resident and breeding bird surveys (point counts) were conducted at each of the five general wind turbine grouping locations for grassland and State-listed species such as the northern harrier (*Circus cyaneus*) and upland sandpiper (*Bartramia longicauda*) while traveling from one location to another. We are concerned with this statement because it indicates that surveys were conducted from a moving car which would not be appropriate to determine presence, especially for small cryptic species. More detail is needed in the EIS which describes the methodology used during these surveys including dates, times, amount of survey effort, locations, weather conditions, etc. If the method used was inappropriate, we may recommend different protocols. We also recommend statistical analysis of the raw data, if this is possible. Tables, graphs, and charts of survey results will aid the reader in understanding the significance of the data collected.

As we pointed out in our December 2003 and May 2004 letters and during subsequent meetings and phone conversations, we believe that data collection for one spring and one fall season are insufficient to draw accurate conclusions about avian and bat use at this project site. We included that recommendation in our comments on the Draft Public Scoping document as well.

Avian information was gathered from two bird banding stations: Braddock Bay Bird Observatory (BBBO) near Lake Ontario and Kestrel Haven Avian Migration Observatory (KHAMO) in Burdett, New York. While we view the data from these two sources to be of value when evaluating bird migration, site specific information is still required to determine the temporal and spatial use of the project airspace.

It is our understanding that a banding station has operated in the past at the Spring Hill Wildlife Sanctuary on Block School Road in the Town of Prattsburgh. We suggest that you contact the operators of that facility, Mr. and Mrs. Robert McKinney, for more information about avian resources in the project area. With their permission, you should acquire any pertinent avian data collected in the past and discuss with them avian use of the project site, since turbines are proposed in the areas surrounding their sanctuary. Further, information from this facility is extremely important and relevant to the avian evaluation for this project and should be included in the EIS. Of particular interest would be the timing and magnitude of migration observed at this station along with information of any State- or Federally-listed species or species of

conservation concern. In addition, a comparison of banding data from Spring Hill to the other two banding stations, as well as the acoustic and radar data, would be appropriate.

The project sponsor arranged for collection of avian data through the use of a mobile radar unit and acoustic monitoring. Acoustic monitoring was conducted by Old Bird, Inc., in the spring of 2004 generally from mid-April to early June and during the fall migration from mid-August until mid-October. In addition, the acoustic report indicates that fall acoustic data gathered from sites 25 miles east and west and also 10 miles northwest of the project area were analyzed to provide a regional baseline of acoustic data. A large amount of data from various sources, such as historical and current NEXRAD radar data, weather data and information from other wind projects, was collected and analyzed. Considerable effort was made to show the correlation between this data and the migration patterns of birds, particularly during the fall of 2004. One of the important points that we would like to note from this work is that there was a good positive correlation between the data collected at the mobile radar unit and the acoustic data. Therefore, there was some validation of data between the two techniques. However, using these two techniques together occurred on only one other project which had a very small data set. More testing and data must be collected to verify the results of the Ecogen study. We typically recommend that three years of preconstruction data be gathered at each wind energy site to account for variability in weather and bird abundance. Additional data collection would not only help validate the technique of using the acoustic and radar equipment together but also verify the study results for this project.

Figure 18 of the acoustic report indicates that variability does exist between years in the number of bird calls detected. The acoustic data for the station in Alfred, New York shows significant year-to-year variability among nights and among years. It is noted in the acoustic report that the number of calls detected in 2004 was distinctly lower than in two earlier years. This demonstrates that one year of data is insufficient to draw accurate conclusions about bird and bat use of a particular site.

Radar monitoring of nocturnal migrants was completed by ABR, Inc., at the project site in the fall of 2004 from mid-August until the end of September. A radar study was not conducted in the spring of 2004, but data were collected in the spring of 2005. The data and report of this effort are not yet available. In reviewing the fall 2004 data, it appears that the study may have missed a large, but undetermined, portion of the migration. Because the study was completed at the end of September, birds migrating in October were not included. Banding data from BBBO and KHAMO indicate that large numbers of birds were observed at those stations during October, with days of heavy activity occurring throughout the month. Likewise, NEXRAD data indicates moderate to heavy biotarget activity in early to mid-October. Therefore, a potentially substantial portion of the migration period was missed during the radar sampling effort. We note that the text in the DEIS, on page 3-35, is misleading and incorrect in that it states surveillance radar can detect targets out to 6 miles (it should be 6 kilometers or 3.7 miles). Further, this is only true for large targets such as flocks of waterfowl. As is indicated by ABR, Inc., in their report, the mobile radar unit in this mode can detect small birds to a distance of only approximately 0.93 mile (1.5 kilometers).

Radar data were collected for approximately 6.5 hours per night during a 45-day period in the fall of 2004. Because birds will migrate throughout the night, a portion of the number of migrants most likely was missed by the radar sampling. Based on acoustic data collected at the same project area, a significant number of migrants was heard after midnight on some nights. For example, call data on September 9-10, the peak night of the fall migration, were heaviest

between 1:00 a.m. and 5:00 a.m. Therefore, a portion of the migration peak was missed by radar sampling.

The use of acoustic and radar monitoring techniques concurrently is promising. While we believe that Old Bird, Inc., and ABR, Inc., did a professional job at gathering avian and bat data, it is our position that additional information must be collected at this site to fully understand the use of the project airspace by birds and bats. Since the spring 2005 radar study is not yet available, we reserve the opportunity to provide additional comments on avian and bat issues.

Section 3.3.1.4 discusses bats species found in the project area and potential impacts. As with the avian studies, sampling in one year does not provide sufficient information on density or use of the project airspace. Further, it does not provide an adequate foundation for assessing risk. We note that mist net sampling and acoustic monitoring of the 33,000-acre site occurred over only 10 nights. While we believe the data collected are of value, they fall short of the necessary effort required to understand bat use of the project airspace. The mist net and acoustic effort may not have documented all of the species found in the project area. Therefore, we recommend additional data collection at the project site.

The text suggests that bats can fly through the turbine rotor swept zone and actively avoid the blades based on thermal imaging studies in West Virginia. This is misleading because the text does not indicate that hundreds of bats were killed by turbines in less than two months of study at that West Virginia site. When adjusted for scavenging and searcher efficiency, the total killed would be between 1,500 and 3,000 bats. We note that the DEIS does not provide an analysis on the risk of this project to resident and migrating bats or the potential impacts expected. More discussion is needed in the document on this topic, especially since bats, in certain situations (such as forested ridgelines), appear to be highly vulnerable to collisions with turbines.

Recognizing the potential impacts to wildlife due to development of wind power projects, the Service developed *Interim Guidelines to Avoid and Minimize Wildlife Impacts from Wind Turbines* (Guidelines) (Service 2003). A copy of this document may be obtained from our office or found on the Internet at www.fws.gov/r9dhcbfa/WindTurbineGuidelines.pdf. These Guidelines include recommendations for: 1) proper evaluation of wind resource areas; 2) proper siting and design of turbines within development areas; and 3) pre- and post-construction research and monitoring to identify and/or assess impacts to wildlife. We previously suggested that the project sponsor review this information during the development of the project design.

Section 4.0 – This section discusses the various alternatives considered for this project including the no-action alternative and alternatives which involve changing the project size and configuration. Although the report explains that a project with less turbines is not feasible, this assumption is based on the 1.5 Mw-sized turbines. It does not consider a project with 1.65 or 2 Mw turbines which individually may be slightly larger in size but could result in a reduction in the total number of turbines without reducing the generating capacity of the project. For example, five turbines could be eliminated if 1.65 Mw turbines are specified and 13 turbines could be eliminated if 2 Mw turbines are installed. While we understand that larger turbines may mean a potential increase in rotor swept area and more avian and bat fatalities, this may not necessarily be the case. Information of the General Electric (GE) website (GE 2005) indicates that turbines may be made to project specifications stating “While the new 2.X MW class maintains a common nacelle design and turbine platform, it also offers versatility in the form of varying hub heights and rotor diameters. With hub heights available up to 120 meters and a wide variety of rotor diameters (up to 94 meters), we can help optimize your tower and rotor

configuration to provide the most economic return for your unique project.” We request the project sponsor investigate the possibility of using slightly larger turbines in order to reduce the total number of structures in the project area.

We note that the acoustic studies indicated a migration channeling affect within Seagar Gully and around the eastern end of the project site. With this information in mind, the applicant has not made any changes to the project design. We understand that the project location is based upon the wind resource. However, it appears that other locations may be available to microsite a number of turbines (especially if the total number of turbines is reduced). While we believe more data collection are required to confirm the migration channeling situation, it should be incumbent upon the applicant to modify the project design to remove turbines from this area if it is known that a higher number of migrants is using the area. We find that the applicant’s claims that measures have been or will be taken to mitigate potential impacts to birds and bat to be unfounded and not proven in this document.

Section 7.0 – Cumulative impacts are discussed in this section with a focus on project-specific impacts as well as the potential impacts from another wind energy facility proposed in the same area. A similar wind project is being developed in the same general area by WindFarm Prattsburgh (Global Harvest). The Global Harvest project, which would consist of 25 to 50 turbines, is also currently proceeding through the scoping process. The proposed locations of the Global Harvest turbines are found on Figure 7.1-1. Many turbine locations overlap in the same general area for both projects. This undoubtedly will cause turbulence problems if turbines are located too close together or too many turbines are located in one area. We question how this issue will be resolved. In the past, both Ecogen and Global discussed constructing their projects in two phases, essentially doubling the number of turbines from what has been discussed in this report. It should be made clear what Ecogen’s intentions are for the future with respect to the size of this project.

Unfortunately, the cumulative impact analysis for both projects is similar to the analysis for the Ecogen project provided in other sections of the DEIS. There is no quantification of potential cumulative impacts to natural resources. Instead, the document makes a blanket statement that the collective impacts are expected to be minimal. The document goes on to say that at under a worst-case scenario, the impacts would be double for two projects. But as we pointed out earlier, impacts were not quantified for the Ecogen project so it is impossible to understand the magnitude of the projects, individually or collectively. We find this analysis to be unacceptable to determine potential cumulative impacts. At a minimum, existing information and mapping (i.e. wetland, soils, and stream mapping, aerial photographs, land use mapping) should have been overlain with all of the proposed turbines from both projects. It is obvious very little effort went into this analysis and we recommend that it be revised.

We would like to point out that other wind energy projects are proposed in the vicinity of the Ecogen and Global projects. The Cohocton and Bishop wind projects are each proposed to the west of the Ecogen site and other projects have also been proposed to the northwest in Ontario County. While we do not expect Ecogen to know all of the details of these projects or quantify impacts at this level, some information and discussion could be provided of the potential cumulative impacts to birds and bats on a regional basis. We recommend this discussion be included in the EIS.

In summary, we find that the DEIS does not contain adequate information regarding potential impacts of the project on wildlife and habitat. Notably lacking is basic information regarding

potential impacts to natural resources such as intermittent and perennial streams, wetlands, wildlife, and various types of habitat found in the project area. In our view, additional data on avian and bat use of the project site are also required prior to drawing conclusions on the significance of potential project impacts. We recommend that additional data be gathered by radar, acoustic, and visual observation methods to verify results of existing studies conducted at this site.

Given that a large amount of critical information is lacking in the DEIS, we recommend additional information be gathered, as recommended above, and potential impacts to natural resources reanalyzed, including potential cumulative impacts. This information should be incorporated into a revised DEIS or supplemental EIS and submitted for review prior to the preparation of a Final EIS. We recommend the IDA not issue a Findings Statement until this additional information and analysis can be provided.

Finally, the Service recommends that all wind power projects that proceed to construction be monitored for impacts to wildlife following construction and during turbine operation. Post-construction bat and bird mortality monitoring should occur for a minimum of three years. Monitoring methods should be coordinated with both the Service and the NYSDEC. Information gained from post-construction monitoring will continue to aid the Service and project sponsors as we learn more about potential impacts, or lack thereof, to wildlife in the project area. We recommend that project approval not be given until after the details of the post-construction monitoring plan have been reviewed and approved by the Service and NYSDEC.

We appreciate the opportunity to provide comments on the DEIS. We look forward to working with the project sponsor and the IDA on reviewing additional project information so that the potential impacts to wildlife can be minimized. If you have any questions regarding this letter, please contact Timothy Sullivan at (607) 753-9334.

Sincerely,

David A. Stilwell
Field Supervisor

References:

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Enclosure

cc: NYSDEC, Albany, NY (K. Kispert)
NYSDEC, Avon, NY (J. Cole)
COE, Auburn, NY (M. Crawford)