RE: GALLOO ISLAND WIND, LLC. Case No. 15-F-0327

Date: July 17, 2017

Document title: Forward USFWS Stipulation Comments

Submitted by:

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July 17, 2017

Hon. Kathleen H. Burgess
Secretary to the Commission
Three Empire State Plaza
Albany, New York 12223-1350

and

Ms. Ashley Moreno
Presiding Examiner
Three Empire State Plaza
Albany, New York 12223-1350

RE: GALLOO ISLAND WIND, LLC. 15-F-0327

Dear Secretary Burgess and Presiding Examiner Moreno:

Please find attached a letter from David Stilwell, Field Supervisor for the Cortland Field Office of the United States Fish and Wildlife Service. Stilwell's letter was also filed under Public Comments section of this case on July 14, 2017. I urge the parties to review the USFWS's comments on Apex's Final Stipulations for their Galloo project.

Although the USFWS comments were filed outside the posted 6-19-2017 deadline for stipulation comments, the comments and recommendations are important in that they describe serious deficiencies in Galloo's study plan for avian impacts and suggest further studies to improve understanding of potential adverse impacts associated with Apex Clean Energy's proposed development of Galloo Island. What is more, the recommendations suggested by the USFWS are more detailed and expansive points that I made in my comments on Galloo's stipulations, which I submitted within the 30-day comment period.

Briefly, the USFWS concluded "…*that the 2008 radar studies for Galloo Island are outdated,*" and that "*additional radar surveys be conducted on the island to more accurately understand the potential risk of the project to wildlife*." This supports my recommendation that Galloo should conduct two years of new radar studies.

The USFWS also called for a far more expansive assessment of Cumulative Impact Analysis on avian resources than Apex provided in their Final Stipulations. Apex offered to include three wind projects in their Cumulative Analysis: Wolfe Island, Amherst Island and Horse Creek. Ideally, the USFWS, stated, Apex's cumulative analysis should include wind energy projects lo-

cated regionally, including more than a dozen operational and planned projects in both U.S. and Canada. The analysis should consider all projects that could affect the region's migratory flyway.

The USFWS comments also revealed that Apex undertook special Bald Eagle studies on Galloo in 2016, but the Service has not received any communication since a July 2016 meeting with Apex. USFWS noted, *"We request that the DPS consider incorporating measures in the final stipulations which account for the ongoing surveys being completed by Apex, and also the potential for additional surveys, if warranted."*

I presume the Bald Eagle studies referenced by the USFWS are those studies associated with an application by Apex for a Programmatic Take Permit, which amounts to a permit for Apex to Take (Kill) Bald Eagles on Galloo Island. In an 8-2-2016 email obtained from a NYSDEC FOIL request, Apex indicated that *"…they are consulting with USFWS to develop a "take" permit for bald eagle as a parallel process to NYS requirements. Larry Weintraub* (NYSDEC General Counsel) *indicated that the substance of Article 11 requirements will be folded into the Article 10 process."*

We are due explanations by Apex and NYSDEC. Is Apex intending to file for a Take (Kill) Permit? If so, then why was it not mentioned in Apex's PIP, PSS or Final Stipulations? Why the covert studies? Why did Apex decide to keep a Bald Eagle survey of Galloo a secret? Was the idea fostered by NYSDEC to quietly issue a Take (Kill) Permit folded into the Article 10 process, an obfuscation with the hope that no one would know and thereby no one would complain? Again, the parties and public are due explanations by both Apex and NYSDEC.

Finally, if Apex chooses to ignore the reasonable and responsible recommendations by USFWS, then the Siting Board should deem Apex's application incomplete.

Sincerely yours,

Clifford P. Schneider
Pro Se
Wellesley Island, NY 13640

United States Department of the Interior

FISH AND WILDLIFE SERVICE
3817 Luker Road
Cortland, NY 13045

July 12, 2017

Ms. Kathleen Burgess
Secretary
New York Board on Electric Generation
Siting and the Environment
Three Empire State Plaza
Albany, New York 12223-1350

Dear Ms. Burgess:

The U.S. Fish and Wildlife Service (Service) has received the notice from the New York State Department of Public Service (DPS) dated May 19, 2017, inviting comments on draft study stipulations for the proposed Galloo Island Wind project located in the Town of Hounsfield, Jefferson County, New York. This wind energy project is being proposed by Apex Clean Energy to generate up to110 megawatts of electricity for sale onto the wholesale market. Apex is seeking a Certificate of Environmental Compatibility and Public Need under the New York State Article 10 process administered by the DPS.

Our review and comments are being provided pursuant to the Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. 668-668d), Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*), and Migratory Bird Treaty Act (MBTA) (40 Stat. 755; 16 U.S.C. 703-712).

Project Description

The project involves construction of approximately 32 wind turbines that are 574 feet tall, each with a nameplate capacity of 3.4 megawatts. Electric collection lines, substation, access roads, and two meteorological towers will also be constructed on Galloo Island. Additional facilities required for the project include an operation and maintenance building, barge landing site, residential structure, heliport, borrow area, batch plant, and staging area.

Electricity generated from the turbines would be transmitted via a submerged 145 kilovolt alternating current cable in Lake Ontario terminating approximately 30 miles to the south at a substation in Oswego. This aspect of the project will be evaluated under the New York State Article 7 process. Anticipated start of commercial operation is in 2019.

Land use and land cover types on the island include grasslands, deciduous forest, wetlands, and a few residential and storage buildings. Most of the approximately 2,000 acre island is privately owned. It is located approximately 6 miles west of the mainland.

Previous Studies

A wind project was previously proposed on Galloo Island by another developer but never constructed. Subsequently, the project was ultimately sold to Apex. Previous wildlife studies included winter bird surveys, diurnal bird movement surveys, breeding bird surveys, acoustic bird surveys, bat surveys (acoustic and mist netting), habitat assessment, and a mobile marine radar survey. These surveys took place over the 2007 to 2009 timeframe. In 2015, additional surveys were conducted for breeding birds, diurnal bird movements, bats, and bald eagle nests. No additional surveys are planned at this time according to the stipulations document.

The stipulations document indicates Apex will compare the results of the 2008 radar study conducted on the island with a radar study completed by the Service in the spring of 2013. However, we have several concerns about attempting to make this comparison because different equipment was used for the studies, different approaches were used to analyze the data, and the study time periods used by the project sponsor were inadequate. Both of the radar studies conducted in 2008 were too short to inform us about the magnitude and timing of migration. For example, the spring study did not commence until April 15, but migration typically starts March 1. Likewise, the fall study period ended on October 7, whereas migration typically lasts through October for passerines and well into November for raptors. The abbreviated studies likely missed key periods of migration and, therefore, undercounted migrants. In addition, the risk analysis likely understated potential impacts based upon the missing data.

Additionally, the 2008 studies used uninformative metrics (e.g., mean flight height and percent of targets under 125 meters) to support a conclusion of low risk. These metrics are not representative of true altitudinal distributions of migrants, due in part to uncorrected biases associated with radar sampling, nor was the rotor-swept height used to determine risk appropriate for the current proposed turbine size of 175 meters in height. Further, during sampling a single antenna was used on the radar and had to be switched between vertical and horizontal modes, limiting the data collection for both sample parameters. Finally, an X-band radar was used in 2008 which collects minimal data during inclement weather thereby missing portions of the migration. Given these and other factors, the Service believes the study does not adequately characterize wildlife movement and risk at this site.

The Service has not discussed the radar studies with Apex in depth. On Page 27 (Exhibit d)(5)) of the stipulations document it is indicated that Apex should provide a discussion of the proposed project in relation to the Service's spring 2013 radar report to the extent practicable and to the extent that the existing data allows. It has been nearly a decade since the original study was undertaken and significant methodological and technical advancements in the use of radar as a survey method have been made during that time. These changes dramatically improve the utility and accuracy of the data collected, but many of these advancements are contingent on data collection improvements. For the reasons mentioned above, we believe that our 2013 study cannot be directly compared with the 2008 radar study. It is our position that the existing radar

data for the project site is outdated and was collected and analyzed in a way that is inferior to the equipment and methods used by the Service and are currently available.

As mentioned above, independent of the surveys conducted by the project sponsors, the Service conducted a mobile marine radar study at four sites around Lake Ontario in the spring of 2013 (see https://www.fws.gov/radar/documents/Avian%20Radar%20Sp2013%20Ontario%20Full.pdf). We conduct these studies to learn more about migration near the Great Lakes and as part of an effort to inform wind energy project siting. One of the four sites was located in the Town of Belleville near the Lake Ontario shoreline, approximately 13 miles southeast of Galloo Island. Given the study location, Galloo Island was not within the survey range of the equipment. However, the data can provide general information on flight volumes and characteristics of biological targets flying along the lake. Our data suggest the shorelines are important to migrants and can concentrate them, especially in the spring. Further, habitats along the shoreline (and islands) provide areas for nocturnal migrants to land in order to rest and feed during the day. These stopover sites are critical refueling locations during migration and provide important shelter during inclement weather.

In addition, the Service conducted a fall radar survey in 2016, the results of which are currently being prepared for publication. The fall data suggest strong nocturnal migration directly across Lake Ontario and the Jefferson County study site had a higher overall target passage rate than other sites studied. In addition, we conducted a gradient study along the east shoreline of Lake Michigan and found significantly more migrants along the shoreline than further inland (publication pending). These findings are likely to be true across all Great Lakes. These mass movements, combined with dawn movements to shorelines by migrants, result in a potentially high likelihood of interaction between migratory animals and wind turbines. Given the results of our Great Lakes radar studies, we have found that most shoreline areas tend to concentrate migrants and provide them with important habitat for survival during migration. Therefore, careful consideration should be given to the potential risk posed by wind energy development to migrating animals in these areas.

It is our conclusion that the 2008 radar studies for Galloo Island are outdated. The studies did not adequately cover migration periods and the data was analyzed using uninformative metrics. Unfortunately, our studies in 2013 and 2016 did not cover the project site, but were conducted approximately 13 to 26 miles away. Therefore, we recommend additional radar surveys be conducted on the island to more accurately understand the potential risk of the project to wildlife. Information is available to help with the development of radar study protocols in the Service's 2014 guidance *A Guide for Designing and Reviewing Bird and Bat Studies Using Avian Radar Systems to Assess Mortality Risk from a Wind Facility* (U.S. Fish and Wildlife Service 2014, available upon request). The Service will lend technical assistance to Apex should they request it. If the DPS chooses not to require updated radar surveys, we recommend that the stipulation be modified to include both the spring 2013 and fall 2016 Service studies.

Federally Listed Species

The proposed project is within the range of the federally listed threatened northern long-eared bat (*Myotis septentrionalis*). Currently, we have no site-specific information which suggests this species would be found breeding on the project site. This species likely migrates through the project area; however, any "take"[1] that may occur incidental to this project is not prohibited under the final 4(d) rule[2].

The most recent compilation of federally listed and proposed endangered and threatened species in New York is available for your information. Until the proposed project is complete, we recommend that you check our website regularly to ensure that listed species presence/absence information for the proposed project is current.*

Any additional information regarding the proposed project and its potential to impact listed species should be coordinated with both this office and with the New York State Department of Environmental Conservation (NYSDEC).

Bald Eagles

Bald eagles (*Haliaeetus leucocephalus*) have been delisted pursuant to the ESA, but remain protected under the MBTA, BGEPA, and by the state of New York. Our records indicate that bald eagles use the project area and nest in the region around the project. Numerous bald eagle nests are known in Jefferson County, including along the St. Lawrence River and near the shore of Lake Ontario. In addition, many eagles are observed every winter near Galloo Island where open water provides suitable foraging habitat. This wintering area appears to be important for resident birds in New York State as well as migrants from Canada.

Prior to 2016, no surveys were conducted specifically targeting bald eagles. However, winter bird surveys were completed in the winters of 2007-2008 and 2008-2009. Several bald eagles were regularly observed using the island shoreline in both years, and up to a dozen eagles were spotted at a time. On one occasion, five individuals were also observed roosting in a forested section of the island's interior. Additionally, a 2015 breeding bird study recorded adult and sub-adult bald eagles on and over the island, including at rotor-swept height.

On July 29, 2016, the Service met with Apex to discuss existing species information and the potential for gathering additional data. Our recommendation was to gather additional eagle use data in the project area so that a proper risk assessment could be completed. Apex indicated that they would update the Service 6 months after initiating the work and also provide data to us, but we have no record of receiving any information to date. We indicated that a second year of surveys may be needed, as recommended by the Service's Eagle Conservation Plan Guidance: Module 1 – Land-based Wind Energy, 2013 (ECPG). The ECPG can be found at https://www.fws.gov/migratorybirds/pdf/management/eagleconservationplanguidance.pdf.

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[1] Take is defined in Section 3 of the ESA as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.

[2] http://www.fws.gov/midwest/endangered/mammals/nleb/pdf/FRnlebFinal4dRule14Jan2016.pdf

The project stipulations do not specifically mention bald eagles or the collection or analysis of bald eagle data. Included in the stipulations on Page 27 is a statement in Exhibit 22, Section f (iii) that "information regarding the presence of New York State and federal threatened and endangered (T&E) species, SSC (species of special concern) and SGCN (species of greatest conservation need) and the Facility's potential impact to such species or their habitats will also be discussed." There are no specific study recommendations related to bald eagles. As mentioned above, the Service made recommendations for additional bald eagle surveys to be completed and also left open the possibility for additional surveys, should they be warranted. We request that the DPS consider incorporating measures in the final stipulations which account for the ongoing surveys being completed by Apex, and also the potential for additional surveys, if warranted.

Cumulative Impact Analysis

The draft stipulations indicate on Page 28 that a cumulative impact analysis will be completed by Apex. This analysis will cover birds, bats, state, and federally listed species, and their habitats. However, the analysis will only cover a few existing wind projects such as the Wolf Island project in Ontario, Canada, the proposed Amherst Island project (also in Ontario), and the Horse Creek project in the Town of Clayton. A general statement is made about including other projects in the analysis, indicating that there will be " ....a description of the anticipated impacts to avian and bat species and their habitats, based on information collected on site between 2007-2016, any other publicly available avian and bat data collected at nearby wind projects and any information provided by the NYSDEC." This is a broad statement and does not direct Apex to specifically include other operating wind projects in the region nor many proposed projects being considered. We recommend the DPS be more specific in which projects Apex should consider in this analysis such as the Maple Ridge, Roaring Brook, Copenhagen, Number Three, and Deer River projects, all in adjacent Lewis County. There are also many projects proposed in Ontario including Wolfe Shoals, Main Duck Shoals, Dorland, White Pines, Loyalist, Ernestown, Polar Bear, Pleasant Bay, and Upper Canada. Ideally, the cumulative impact assessment should consider wind energy development on a regional basis taking into account the projects identified above which lie within the migratory pathway of flying animals such as birds and bats. As mentioned in the stipulations document, the NYSDEC should be consulted for information and guidance in gathering data and conducting the analysis.

Several recent studies have been conducted which discuss the risk of wind energy to bats (see Arnett and Baerwald, et al. 2015, Smallwood, 2013, and Hayes, 2013). One by Frick, et al. (2017), *Fatalities at Wind Turbines May Threaten Population Viability of a Migratory Bat* is a useful reference to understand the potential cumulative scope of wind energy development and its impact on bat populations.

Post-Construction Monitoring

If the project proceeds, the Service recommends that the site be monitored for impacts to wildlife following construction and during turbine operation. A post-construction bat and bird mortality monitoring plan should be developed and provided for review. Proposals for conducting monitoring should be coordinated with both the Service and the NYSDEC to ensure they are

comprehensive, accurate, and correctly timed. 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. Monitoring should also be part of a strong adaptive management program for the project.

We appreciate the opportunity to provide comments on the draft stipulations. We look forward to working with the DPS, NYSDEC, and Apex in reviewing additional project information so that potential impacts to wildlife can be adequately evaluated. If you have any questions regarding this letter, please contact Tim Sullivan at 607-753-9334.

Sincerely,

David A. Stilwell
Field Supervisor

*Additional information referred to above may be found on our website at: http://www.fws.gov/northeast/nyfo/es/section7.htm

References:

Arnett, E. E. Baerwald, F. Matthews, L. Rodrigues, A. Rodriguez-Duran, J. Rydall, R. Villegas-Patraca, and C. Voigt. 2015. *Impacts of Wind Energy Development on Bats: A Global Perspective* In *Bats in the Anthropocene: Conservation of Bats in a Changing World.* Springer International Publishing. PP 295-323.

Hayes, M.A. 2013. *Bats Killed in Large Numbers at Unites States Wind Energy Facilities.* BioScience 63 (12): 975-979

Frick, W.F., E.F. Baerwald, J.F. Pollack, R.M.R. Barclay, J. A. Szymanski, T.J. Weller, A.L. Russel, S.C. Loeb, R.A. Medellin, and L.P. McGuire. 2017. *Fatalities at Wind Turbines may Threaten Population Viability of a Migratory Bat.* Biological Conservation 209:172-177.

Smallwood, K. S. 2013. *Comparing Bird and Bat Fatality-rate Estimates among North American Wind-energy Projects.* Wildlife Society Bulletin Volume 37, Issue 1, pp 19-33.

U.S. Fish and Wildlife Service. 2014. *A Guide for Designing and Reviewing Bird and Bat Studies Using Avian Radar Systems to Assess Mortality Risk from a Wind Facility. 28* pp.

U.S. Fish and Wildlife Service. 2016. *Great Lakes Avian Radar Technical Report Niagara, Genesee, Wayne and Jefferson Counties, New York.* 96 pp.

U.S. Fish and Wildlife Service. 2013. *Eagle Conservation Plan Guidance: Module 1-Land-based Wind Energy. Version 2.* 118 pp.

cc: Apex Clean Energy, Charlottesville, VA (C. Mosley)
NYSDEC, Albany, NY (Attn: B. Denoncour)
NYSDEC, Watertown, NY (Attn: F. Munk)
USFWS, Hadley, MA (Attn: T. Wittig)