NEW YORK STATE BOARD ON ELECTRIC
GENERATION SITING AND THE ENVIRONMENT

CASE 17-F-0282 - Application of Alle-Catt Wind Energy LLC for a Certificate of Environmental Compatibility and Public Need Pursuant to Article 10 for a Proposed Wind Energy Project, Located in Allegany, Cattaraugus, and Wyoming Counties, New York, in the Towns of Arcade, Centerville, Farmersville, Freedom, and Rushford.

ORDER GRANTING CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED, WITH CONDITIONS

Issued and Effective: June 3, 2020

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At a session of the New York State Board on Electric Generation Siting and the Environment held in the City of Albany on June 3, 2020

BOARD MEMBERS PRESENT:

John B. Rhodes, Chair
New York State Public Service Commission

Louis Alexander, Alternate for
Basil Seggos, Commissioner
New York State Department of Environmental Conservation

Dr. Elizabeth Lewis-Michl, Alternate for
Howard A. Zucker, M.D., J.D., Commissioner
New York State Department of Health

Vincent Ravaschiere, Alternate for
Eric Gertler, Acting Commissioner, President & CEO-designate
New York State Empire State Development

John Williams, Alternate for
Richard L. Kauffman, Chair
New York State Energy Research and Development Authority

Christopher Mueller, Ad Hoc Member

CASE 17-F-0282 - Application of Alle-Catt Wind Energy LLC for a Certificate of Environmental Compatibility and Public Need Pursuant to Article 10 for a Proposed Wind Energy Project, Located in Allegany, Cattaraugus, and Wyoming Counties, New York, in the Towns of Arcade, Centerville, Farmersville, Freedom, and Rushford.

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BY THE BOARD:

I. INTRODUCTION

By this Order, the Board on Electric Generation Siting and the Environment (Siting Board) grants to Alle-Catt Wind Energy LLC (ACWE or the Applicant) a Certificate of Environmental Compatibility and Public Need to construct and operate a 340-megawatt (MW) wind electric generating facility consisting of up to 116 wind turbines located in the Town of Arcade (13 turbines), the Town of Centerville (36 turbines), the Town of Rushford (13 turbines), the Town of Farmersville (21 turbines), and the Town of Freedom (33 turbines). With the Certificate Conditions attached to and made a part of this Order, we determine the Project will meet all statutory requirements for certification under Article 10 of the Public Service Law (PSL). Our decision is supported by the extensive evidentiary record compiled through hearings before the Presiding Examiners appointed by the Department of Public Service (DPS) and the Associate Examiner appointed by the Department of Environmental Conservation (DEC), who summarized the record and made proposed factual findings and determinations in a Recommended Decision (RD) issued previously in this case. We base our decision on the evidentiary record, post-hearing briefs, the RD, briefs of the parties on exceptions to the RD and briefs of the parties opposing exceptions, public comments, and applicable law and policy.

II. BACKGROUND

A. Proceedings and Public Comment

A description of the Project proposed by ACWE is set forth in the RD issued by the Secretary on February 27, 2020. The RD also provides a summary of the procedural background, including a description of the public involvement and comment

procedures conducted by both ACWE and the Department of Public Service during the pre-application and application stages of the Article 10 review of the Project. An additional 73 public comments were filed since the issuance of the RD, most of which urge the Siting Board to deny ACWE's application. In addition, a number of comments reference the COVID-19 public health measures and request that the Siting Board extend its time for a decision on the application.

Briefs on exception to the RD were filed on or before April 1, 2020, by the Applicant, Department of Public Service Staff (DPS Staff), Department of Health (DOH), Department of Agriculture and Markets (DAM), the combined Towns of Freedom and Farmersville, and the Coalition of Concerned Citizens (CCC). Briefs opposing exceptions were filed on April 16, 2020, by the Applicant, DPS Staff, Department of Environmental Conservation Staff (DEC Staff), Freedom and Farmersville, and CCC.

B. Burden of Proof

The applicant in an Article 10 proceeding has the burden to prove that, based on the evidentiary record, all findings and determinations required by PSL § 168 can be made by the Siting Board.[1] When factual matters are involved, the applicant must sustain that burden by a preponderance of the evidence, unless a higher standard has been established by statute or regulation.[2] In the Recommended Decision, the Examiners found that, subject to the proposed Certificate Conditions, the evidentiary record fully supports the findings the Siting Board must make pursuant to PSL § 168 prior to issuing this Certificate and Order.

[1] 16 NYCRR § 1000.12(b).

[2] 16 NYCRR § 1000.12(c).

C. Adoption of the Recommended Decision, Certificate Conditions, and Site Engineering and Environmental Plan

This Order discusses only those aspects of the Recommended Decision and Certificate Conditions to which the parties have raised exceptions or which the Siting Board otherwise has decided to modify. Insofar as we adopt without modification the recommendations of the Examiners as set forth in the Recommended Decision, we also incorporate by reference the Examiners' discussion and reasoning in support of those adopted recommendations and Certificate Conditions, which will not be repeated here.

For the reasons set forth in the Recommended Decision and as otherwise modified below, we adopt the proposed Certificate Conditions (Appendix A). In addition, we adopt and incorporate by reference as guidance the proposed Site Engineering and Environmental Plan (SEEP) specifications (Attachment A to the Certificate Conditions); and the Sound Testing Compliance Protocol (Appendix B).

III. FINDINGS AND CONCLUSIONS RELATED TO PROCEDURAL MATTERS

A. Description of the Project

The Towns of Freedom and Farmersville (Towns) take exception to the description of the Project on the ground that the record does not contain a final configuration of turbine types, the reconfiguration of interconnection lines and turbine types required if the Siting Board applies the Town of Freedom's 2007 local law, and the details of the construction and operation of the proposed concrete batch plant.[3] ACWE responds that the Towns' argument misunderstands the manner in which the Siting Board administers Article 10. ACWE cites the Siting Board's Number Three Wind order, in which it rejected the

[3] Towns of Freedom and Farmersville Brief on Exceptions, p. 9.

applicant's attempt to propose a final configuration as premature.[4] The Siting Board held in that case that the "final maps, plans, diagrams, drawings, studies, reports, or other documents" demonstrating how compliance with the certificate conditions will be achieved are made after the order granting the certificate with conditions issues, and that construction is prohibited until such compliance filings are approved.[5]

We see no reason to change the Siting Board's settled process in this proceeding. ACWE's filings in compliance with the certificate conditions attached to this Order will be served on all parties, and the Towns will have a full opportunity to raise objections to the final configurations before we allow any construction of the facilities.

B. Public Involvement and Outreach to the Amish Community

The Towns argue on exceptions that the Siting Board must find that there was inadequate public participation with regard to the Amish community in Farmersville and that a certificate must therefore be denied.[6] CCC makes the same argument.[7] CCC asserts that ACWE "virtually ignored the Farmersville Amish, treating them just like everyone else, and have failed to minimize and mitigate the special impacts on their community."[8]

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4 ACWE Brief Opposing Exceptions, pp. 21-22; Case 16-F-0328, Number Three Wind LLC – Wind Electric Generation Siting, Order Granting Certificate of Environmental Compatibility and Public Need, with Conditions (issued November 12, 2019)(Number Three Wind Order), pp. 26-32.

5 Number Three Wind Order at footnote 102.

6 Towns Brief on Exception, pp. 10-11.

7 CCC Brief on Exceptions, pp. 47-51.

8 CCC Brief on Exception, p. 51.

ACWE responds that there are two distinct Amish communities in the Project area, the community in Centerville and the community in Farmersville. ACWE's outreach to the Centerville community was unchallenged, and in fact 16 households in the Centerville Amish community executed leases with ACWE.[9] ACWE asserts that it made reasonable and sufficient outreach efforts with respect to the 22 Amish households in the Farmersville area, and in fact met with Farmersville Amish residents at their request on one of their properties to provide general information about the Project.[10] As noted in the Recommended Decision, ACWE's personnel at that time answered questions about the impact of the Project on farming, schools and traffic, the height of the turbines, and the turbines' mechanical design and foundations. In turn, ACWE's representatives listened to the concerns raised by the Amish residents, their main concern being that the Project would reduce the availability of low cost land that the Amish community needs for future expansion.[11]

The purpose of public outreach is to ensure that stakeholders are informed about the Project and are given opportunities to ask questions, make comments and complaints, and, if they choose, fully participate in the Article 10 process. As noted in the Recommended Decision, there is no statutory requirement of a finding by the Siting Board with respect to the public involvement process.[12] PSL § 170(2)(f) requires a "process that afforded meaningful involvement of citizens affected by the facility regardless of age, race,

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9 Tr. 1754.

10 Tr. 1755.

11 Tr. 1755-1758.

12 Recommended Decision, p. 7.

color, national origin and income." Accordingly, our review of the public involvement process is a consideration of whether the process failed to afford meaningful involvement of affected citizens. We do not find such a failure here. The record establishes that a number of members of the Centerville Amish community are participating in the Project. The record establishes that the members of the Farmersville Amish community were informed about the Project, were given opportunities to ask questions about the Project, and had full opportunities to participate in this proceeding through comments or as full parties. There is no evidence that either Amish community was deprived of these opportunities.

We therefore decline to rule that ACWE's public involvement process failed to afford meaningful involvement of citizens affected by the Project.

C. Procedural issues raised by the Towns

The Towns "reserve the right to appeal" a number of procedural decisions made by the Examiners rejecting the Towns' requests to extend the briefing schedule, to provide supplemental direct testimony, to extend the statutory deadline for adjudication, and to dismiss the application as a result of non-compliance with local laws.[13] If the Towns by this language mean an appeal of the Examiners' procedural decisions directly to the courts, there is no process in PSL § 170 for the Towns to do so. The appeal process in the statute is an appeal from the Siting Board's decision. If the Towns' language means an appeal to the Siting Board, then now is the time for such an appeal. We will therefore treat the "reservation of rights" as an appeal to the Siting Board of the Examiners' procedural decisions.

[13] Towns Brief on Exceptions, pp. 7-9.

We reject the Towns' appeals for the following reasons. First, the Towns object to an allegedly unreasonable delay by the Examiners in ruling on the Towns' motion for extension of the briefing schedule.[14] This motion was not filed until January 7, 2020, a month after the completion of hearings, and was ultimately rejected by the Examiners on January 16, 9 days after the motion was filed. The Towns were not prejudiced by this process. The Towns had no basis for expecting that the motion would be granted, and the 9-day period between the motion and its denial was not in any way excessive.

Second, the Towns refer to PSL § 165(4), which empowers the Siting Board to extend the one-year statutory deadline for making a decision in extraordinary circumstances. The Towns object to the Examiners' failure to recognize this provision in denying the motion to extend the briefing period.[15] It is not the responsibility of the Examiners to make such a determination. No request was made to the Siting Board for such an extension. It would have been unreasonable for the Examiners to extend the briefing period on the assumption that such a request to the Siting Board would be made and granted.

Third, the Towns object to a delay in the hearing transcript and copies of the hearing exhibits.[16] With respect to the hearing exhibits, most of the exhibits were prefiled and available in the Document and Matter Management system prior to the hearings. The exhibits filed after the hearings by permission of the Examiners were available for the most part on December 10, 2019, 5 days after the close of the record, with only a few filed subsequently on various days up to and

[14] Towns Brief on Exceptions, p. 7.

[15] Towns Brief on Exceptions, p. 8.

[16] Towns Brief on Exceptions, p. 8.

including December 20. Although the final hearing transcripts were delayed due to administrative reasons until January 17 and 22, the Examiners instructed the parties to cite in their briefs to drafts of the transcripts which were made available to the parties upon receipt from the transcriptionist or directly to witness pre-filed testimony where necessary. We do not find that these delays were prejudicial to the parties.

Fourth, the Towns claim prejudice because they retained counsel on January 6, 2020, 11 days before briefs were due.[17] This contention belies the fact that the Towns of Freedom and Farmersville have participated in this proceeding since its inception. Both the Town of Freedom and the Town of Farmersville were granted intervenor funding during the preapplication and application phases of this proceeding. It is not that these Towns first retained counsel on January 6, 2020, but that they retained this particular counsel. Any prejudice in this respect was caused by the Towns to themselves by the decision to change counsel at this late stage of the matter.

Finally, the Towns state that they reserve the right to file a petition for rehearing based on any exceptions filed by several other parties.[18] If a petition for rehearing is filed in this proceeding, the Siting Board will evaluate it pursuant to PSL § 170 which requires no such expression of a purported reservation.

IV. FINDINGS AND CONCLUSIONS RELATED TO SUBSTANTIVE ISSUES

Pursuant to PSL § 168(2), the Siting Board must make express findings regarding the nature of probable environmental impacts, including cumulative impacts, resulting from the

[17] Towns Brief on Exceptions, p. 8.

[18] Towns Brief on Exceptions, p. 8.

construction and operation of a proposed Facility. This includes impacts to (a) ecology, air, ground and surface water, wildlife, and habitat; (b) public health and safety; (c) cultural, historic, and recreational resources, including visual, aesthetic and scenic values; and (d) transportation, communication, utilities and other infrastructure.[19] Pursuant to PSL § 168(3), the Siting Board may not grant a certificate unless it determines that the Facility will be a beneficial addition to or substitution for the State's electric generation capacity and serve the public interest; that the Facility's adverse environmental impacts have been minimized or avoided to the maximum extent practicable, including any significant disproportionate impacts on the community in which it is located; and that the Facility is designed to operate in compliance with applicable State and local laws.[20]

In making these determinations, the Siting Board considers several factors, including available technology, reasonable alternatives, environmental impacts, impacts on related facilities, consistency with the State Energy Plan, impacts on community character and whether the community is disproportionately impacted by cumulative levels of pollutants, and any other social, economic, aesthetic, environmental considerations deemed pertinent.[21] In issuing a Certificate, the Siting Board may impose any terms and conditions it deems necessary and the Department of Public Service or the Commission "shall monitor, enforce and administer compliance with any terms

[19] PSL § 168(2)(a)–(d).

[20] PSL § 168(3)(a)–(e).

[21] PSL § 168(4)(a)–(g).

and conditions" set forth in the Siting Board's Certificate and Order.[22]

A. The Nature of Probable Environmental Impacts and Mitigation or Avoidance of Impacts – PSL §§ 168(2)(a) and 168(3)(c) and (e)

The following sections address the exceptions to the Recommended Decision related to State forests, agricultural land, streams, freshwater wetlands, bats, bald eagles and grassland birds. Unless expressly modified as set forth below, we adopt the Examiners' recommendations and proposed Certificate Conditions and determine that the Facility's environmental impacts have been fully identified on the record. Consistent with PSL § 168(2) and (3), we further conclude that the identified impacts will be minimized or avoided to the maximum extent practicable, given the Certificate Conditions we adopt here, and that the Project will comply with all applicable State environmental laws and regulations.

1. State Forests

The Examiners found that, for the Project to avoid or minimize the impacts to State forests to the maximum extent practicable, turbines must have an adequate setback from State forests, transmission lines must be installed underground using directional boring, and turbine noise levels shall not exceed 45 dB(A)-Leq-8 hour at State forest boundaries. Based on that finding, the Examiners recommended the adoption of Condition 65, which provides:

> To avoid impacts to State forests, the Certificate Holder shall comply with the following:
>
> a) Turbines in proximity to State Forests must adhere to all local setback requirements or the Minimum State Forest Setback (no less than 1.1 x tip height

[22] PSL § 168(5).

from the boundary of a State forest), whichever is greater;

b) Turbine noise levels at the boundary of State Forest lands shall not exceed 45 dB(A)-Leq-8 hour applicable across all hours and all such turbines shall be subject to the provisions of Section V, Noise and Vibration Certificate Conditions; and

c) All transmission lines in State Forests shall be underground and directional boring shall be used to install such underground lines in State Forests.

ACWE excepts to the noise limit established in Condition 65(b) and to the "concept of a Minimum State Forest Setback" referenced in Condition 65(a).[23] ACWE argues that the State forests in question are reforestation areas, which are not part of the forest preserve or protected wilderness areas. ACWE also references a claimed conflict between an existing State policy that authorizes fossil-fuel production within reforestation areas,[24] and the recommended condition that would restrict the use of adjoining private property to produce renewable energy.

ACWE argues that the only evidence of adverse impacts to the State forests at issue is the conclusory testimony of DEC Staff that turbine noise would adversely affect recreational opportunities or that turbine collapse would damage trees. ACWE also argues that DEC Staff and the Recommended Decision do not cite any evidence that State forests require greater wind turbine setbacks than established by local laws or that noise standards established for residences should be applied to State forest boundaries.[25]

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[23] ACWE Brief on Exceptions, p. 35.

[24] ACWE Brief on Exceptions, p. 36 (citing Environmental Conservation Law § 9-0507).

[25] ACWE Brief on Exceptions, p. 36.

Based upon application of the DEC's noise policy,[26] DEC Staff sought to have a noise level established at the boundary of the State forests of 40 dBA, which is 5 dBA above the average background noise levels of 35 dBA. ACWE opposed DEC's position, asserting that, in recent orders granting Certificates of Environmental Compatibility and Public Need (CECPN) to wind farms, the Siting Board has "established standard regulatory limits and design goals of 45 dBA-Leq-8 hour applicable across all hours at non-participating residences and 55 dBA Leq-8 hour applicable across all hours at participating residences. These same standards are protective for all purposes and across all land uses in the Project Area, including publicly accessible State forest land."[27]

The Examiners found ACWE's position persuasive and recommended the application of noise standards established by the Siting Board with respect to non-participating residential properties (i.e., 45 dBA-Leq-8 hour) on the ground that such standards are also protective of State forest land.

On exception, ACWE argues that the Examiners drew the "erroneous conclusion that the same [noise] standard was intended by the Siting Board to be applied to the boundaries of State forest lands as if those boundaries themselves are equivalent to residential receptors."[28] ACWE explains that prior Siting Board decisions used the boundary of the actual residence, not the boundary of the parcel, as the receptor for purposes of modeling turbine noise.[29] ACWE also asserts that the

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[26] Hearing Exh. 428.

[27] ACWE Initial Brief, p. 49.

[28] ACWE Brief on Exceptions, pp. 36-37.

[29] ACWE Brief on Exceptions, p. 37.

setback established pursuant to local law should apply, not the more restrictive setback offered by DEC Staff.[30]

In its brief opposing exceptions, DEC Staff takes issue with ACWE's recitation of State reforestation policy, noting that reforested lands are subject to a Strategic Plan for State Forest Management pursuant to which State forests are to "be managed in a sustainable manner by promoting ecosystem health, enhancing landscape biodiversity, protecting soil productivity and water quality."[31] DEC Staff asserts that the recommendations made by DEC Staff in this proceeding are consistent with the Strategic Plan. DEC Staff further notes that a decision to lease a Reforestation Area for oil and gas purposes must also be based on a finding of consistency with the Strategic Plan.[32]

DEC Staff argues that the requested minimum setback of 1.1 x the turbine tip height and any local municipal setback requirement, whichever is greater, should be adopted by the Siting Board. DEC Staff points out that the existing local law requirements are just as protective as, if not more than, DEC Staff's requested minimum setback. DEC Staff notes that, because local laws related to setbacks can be modified, it is preferable to use Staff's requested minimum setback requirement, which once incorporated into a final Siting Board order would not be subject to change.[33]

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30 ACWE Brief on Exceptions, p. 37.

31 DEC Staff Brief Opposing Exceptions, pp. 11-12; Hearing Exh. 424, p. iii (NYSDEC-MPP-4).

32 DEC Staff Brief Opposing Exceptions, p. 12.

33 DEC Staff Brief Opposing Exceptions, pp. 12-13.

Discussion

We conclude that a minimum setback of 1.1 x the turbine tip height from the boundaries of State forests is supported by the record and appropriate. We do not read DEC Staff's proposed condition or the Recommended Decision as establishing or legislating a setback requirement to be applied to any proceeding but this one, notwithstanding its denomination as the "Minimum State Forest Setback." DEC Staff testified that six turbines were proposed within 1.1 x tip height of the boundary of State forest. According to DEC Staff, installation of turbines and associated infrastructure could result in temporary interruption of public use of State-owned land if access to trailheads or parking lots must be blocked or if trails must be closed or re-routed. DEC Staff recommended 1.1 x tip height as a setback because it would apply to any size turbine and ensure that if a turbine were to fall, it would not fall in the State forest. DEC Staff testified that the tip height-based calculation also takes into consideration the risk from ice throw and blade throw.[34]

We conclude that the setback proposed in Condition 65(a) is supported by the weight of record evidence, and is warranted to minimize the potential adverse risk from the small chance that a turbine would fall or because of ice throw. We further note that this setback is consistent with the safety setback proposed by ACWE in the Application.[35] Accordingly, ACWE's exception to the setback requirement is overruled.

With respect to the noise level limit proposed by the Examiners, we conclude on this record that with the 1.1 x tip height setback in place, a noise level limit at the State forest

[34] Tr. 326.

[35] Hearing Exh. 328, Application Exh. 6, rev. 3, p. 6-1.

boundary lines need not be established. ACWE's noise study provides an analysis of the effects of distance on noise from a single wind turbine. As noted in the noise study:

> Once the wind turbine locations are fixed, given that the receptor locations are also fixed, the effect of spreading, ground absorption, and atmospheric absorption are relatively fixed. Figure 3.8 shows the resulting decay in noise level with distance from a single GE 3.6-137 wind turbine operating at full capacity. At a distance of 1,000 feet the noise level is about 44 dBA, at 2,500 feet it is down to about 35 dBA, and at 5,000 feet it is less than 30 dBA and at this point likely to be inaudible.[36]

Figure 3-8 also indicates that at 500 feet, the noise level is about 48 dBA.[37]

The GE 3.6-137 turbine has a tip height of 585 feet.[38] Based on Figure 3-8, the noise level at the 1.1 x tip height setback of 643.5 feet would be approximately 47 dBA.

Regarding potential noise impacts to the State forests, DEC Staff testified that the Project would result in noise impacts "that would impede upon ability of recreation users to find and enjoy quiet places, both during day time activities (e.g., horseback riding, hiking, hunting, birdwatching) and night time activities (e.g., camping)."[39] Given these uses of the State forest by the public, use of the 1.1 x tip height setback will result in compliance with the sound level design goals ACWE set that are arguably applicable to such activities. In the application, ACWE set a design goal

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[36] Hearing Exh. 76, Application Exh. 19, Pre-Construction Noise Impact Assessment (Noise Study), p. 29.

[37] Noise Study, p. 29.

[38] Hearing Exh. 328, Application Exh. 6, rev. 3, p. 6-5 to 6-6, Table 6-2.

[39] Tr. 323-324.

of 55 dBA for "public structures, commercial properties and outdoor public spaces."[40] The 55 dBA standard is recommended for public places where people spend limited amounts of time and to public use areas used for recreation, such as outside school yards and playgrounds.[41] In addition, the Applicant set a design goal of 55 dBA at the boundaries of non-participating properties.[42] As noted in the Applicant's noise study, these design goals are based on the most restrictive activity interference and annoyance-based standards recommended by the World Health Organization (WHO) and the United States Environmental Protection Agency (EPA), among others.[43]

At the 1.1 x tip height setback, the noise level at the State forest boundary from a turbine operating at full capacity would be below the 55 dBA limit set for daytime public use areas and for non-participating property lines. With respect to nighttime uses of State forests for camping, at about 357 feet within the State forest boundary (1,000 feet from the turbine), the noise level would be below 45 dBA, which is the noise limit applicable to non-participating residential receptors where people live and sleep.[44] Accordingly, we conclude that, based on this record, use of the setback will avoid or minimize adverse noise impacts to the public users of the State forests without the need to establish a specific noise level limit at the State forest boundary lines.

ACWE argues that the record lacks evidence of the amount of use the State forests in question receive, the number

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40 Hearing Exh. 240, Application Exh. 19, p. 19-4.

41 Noise Study, p. 43.

42 Hearing Exh. 240, Application Exh. 19, p. 19-4.

43 Noise Study, pp. 34, 42-48.

44 Noise Study, p. 47.

of users or frequency of use.[45] The important point is that all State forests are intended to be used for recreational purposes and we must therefore presume they will be used by the public. The extent that one State forest may be used more than another is not relevant.

Based upon the above, ACWE's exception to the noise limit recommended by the Examiners is sustained. Accordingly, we modify the Recommended Decision and Condition 65 consistent with the discussion above. Based on the above, we conclude that the Project as conditioned avoids or minimizes adverse impacts to State forests to the maximum extent practicable.

2. Agricultural Lands

The Examiners recommended that Certificate Condition 78 be modified to provide for the full-time status and qualifications of the third-party agricultural monitor. ACWE excepts from the requirement that a full-time qualified agricultural professional or a qualified agricultural specialist with a degree or background in soil conservation, hydrology or agronomy is needed for the Project. ACWE argues that DAM Staff will review the Project Environmental Monitor qualifications to determine whether the Monitor is qualified as an agricultural professional or specialist and no rationale supports requiring ACWE to employ different inspectors. In support of its exception, ACWE cites to Condition 78 of the Certificate issued to Number Three Wind, LLC in Case 16-F-0328, in which we approved a single environmental and agricultural monitor.[46] No other party, including DAM Staff, takes exception to Condition 78, or opposes ACWE's exception.

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[45] ACWE Brief on Exceptions, p. 36.

[46] ACWE Brief on Exceptions, pp. 47-48, citing Number Three Wind Order, Appendix A, Certificate Condition 78, p. 35.

Recommended Condition 78 provides:

> The Certificate Holder shall establish funding for an independent, third-party environmental monitor and an independent third-party full-time qualified agricultural professional or qualified agricultural drainage specialist with a degree or background in soil conservation, hydrology or agronomy ~~agricultural monitor~~to oversee compliance with environmental permit requirements. The Certificate Holder will solicit input from the designated representative of the Towns with respect to the selection of the Environmental Monitor. When soliciting input from the DPS Staff and the Towns, the Certificate Holder shall identify one or more candidates and provide qualifications and contact information for the Environmental Monitor. The monitors shall inspect construction sites and issues regular reports to the Certificate Holder, DPS, DEC, and NYSDAM. If the New York State Department of Agriculture and Markets (NYSDAM) agrees that the independent third-party environmental monitor is qualified on agricultural issues, one monitor can act as both environmental and agricultural monitor. (Language modified by the Recommended Decision is underlined or struck out.)

ACWE's exception is overruled. As written, the recommended condition does not require a different inspector if DAM determines the environmental monitor is qualified on agricultural issues. The Examiners' modification of Condition 78 did not change the fact that one project monitor can serve both roles except that the monitor must be full-time. In support of the full-time status of an agricultural monitor, DAM testified that a full-time qualified agricultural professional was required due to the unique and complex soil characteristics of the Project area.[47] This testimony supports the requirement for a separate agricultural monitor if an environmental monitor with the qualifications to function as an agricultural monitor cannot be identified. Proposed Condition 78 here is consistent

[47] Tr. 269-270.

with Number Three Wind's Condition 78. That condition similarly requires separate environmental and agricultural monitors if a monitor qualified to serve as both cannot be identified. Accordingly, we adopt Condition 78 as modified by the Examiners.

3. Streams

The State environmental requirements that apply to a project's impacts to streams and wetlands are set forth in ECL Article 15 (Protections of Waters) and implementing regulations at 6 NYCRR Part 608, and ECL Article 24 (Freshwater Wetlands) and implementing regulations at 6 NYCRR Part 663.[48] In the Recommended Decision, the Examiners held that the Project as currently proposed, subject to the stipulated resolution of issues raised regarding stream crossings and additional conditions recommended by DEC Staff, minimizes or avoids impacts to protected streams to the maximum extent practicable and complies with ECL Article 15 related to impacts to protected streams.[49]

The Examiners recommended that the Siting Board adopt Certificate Conditions 91, 94, 98 through 118, and Attachment A, Package 12, as modified. Based on those Conditions and Package 12, the Examiners recommended that the Siting Board conclude that impacts to streams will be avoided or minimized to the maximum extent practicable, and that Project construction and operation would comply with ECL Article 15, and its implementing regulations.[50]

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[48] Recommended Decision, pp. 39-40. The Project is also required to comply with the State Pollutant Discharge Elimination System (SPDES) program (ECL Article 17). The SPDES program is separately administered by DEC pursuant to federal delegation under the federal Clean Water Act (see PSL § 172[1]) (Recommended Decision, pp. 52-53).

[49] Recommended Decision, p. 44.

[50] Recommended Decision, pp. 40-44.

In its brief on exceptions, ACWE takes exception to recommended Conditions 107A(a), 111, 115(a) and 115A. ACWE's position is that the Condition 107A(a) requirement that a professional engineer must prepare a site-specific assessment for each stream crossing where ACWE plans to conduct the crossing using the trench method is unnecessarily time consuming and costly. Furthermore, ACWE argues that DEC Staff did not provide testimony in support of the condition or explain its necessity.[51] Regarding recommended Condition 111, ACWE notes that the condition omits language agreed upon by DEC Staff regarding DEC approval to disturb the beds or banks of streams during the period when that disturbance is prohibited. ACWE proposes a revision to Condition 111 to address the omitted language.[52]

ACWE takes exception to the requirement in Condition 115(a) that culverts be designed to handle 100-year flooding events rather than the 50-year flooding events required in DEC General Water Quality Certificate Conditions for Nationwide Permits. ACWE argues that recommended Condition 115(a) should be revised by replacing "1% annual (100-year return)" with "2% annual (50-year return)."[53]

ACWE takes exception to Condition 115A because it would require the use of free span temporary bridges or culverts meeting the 1% flooding risk, and DEC or United States Army Corps of Engineers (USACOE) standards for all temporary stream crossings. ACWE argues that neither DEC nor USACOE has standards for temporary stream crossings, and for the reason stated above that the 1% flooding event is not a reasonable

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51 ACWE Brief on Exceptions, p. 30.

52 ACWE Brief on Exceptions, pp. 30-31.

53 ACWE Brief on Exceptions, p. 31.

requirement. Furthermore, ACWE argues that the condition is inconsistent with conditions adopted in other Article 10 proceedings. ACWE notes that it has agreed with DEC Staff that for the crossing of Cheney Brook, ACWE would use "a temporary structure that will span the stream and maintain water quality. These structures would be either a timber matt bridge that would use a concrete stabilizer in the middle, timber crane mats long enough to span the stream, or a temporary bridge if these other options are not feasible."[54] ACWE proposes replacing Condition 115A with language proposed in its brief on exceptions.

In its brief opposing exceptions, DEC Staff argues that ACWE's exceptions regarding stream protection are procedurally untimely because it is the first time ACWE has raised these issues and challenged their inclusion in the Certificate. DEC Staff states the conditions were proposed and offered in DEC's direct testimony, but ACWE failed to counter the inclusion of the conditions in ACWE's rebuttal testimony or in ACWE's post hearing briefs. As for ACWE's exception to Condition 111, DEC Staff is amenable to providing ACWE a list of streams in the Facility area and associated restriction periods, including identification of warm water fisheries, but argues that it is inappropriate to include that language in a Certificate Condition.[55]

Discussion

In making their recommendations, the Examiners acknowledged ACWE's argument that some of DEC Staff's proposed conditions were redundant of conditions proposed by DPS Staff. The Examiners, however, concluded that many of the DEC conditions should replace or amend DPS Staff's proposed

[54] ACWE Brief on Exceptions, pp. 31-32.

[55] DEC Staff Brief Opposing Exceptions, p. 11.

conditions and, by doing so, impacts to streams from the Project's construction and operation would be avoided or minimized to the maximum extent practicable.[56]

ACWE did not object to the conditions proposed by DEC Staff, except to state they were redundant of those conditions proposed by DPS Staff, and ACWE assumed that DPS staff's proposed conditions superseded those proposed by DEC staff.[57] In particular, ACWE did not oppose the specific requirements of DEC Staff's proposed conditions that added or modified recommended Conditions 107A(a), 111, 115(a) and 115A, and the record was not further developed. Although ACWE expressed disagreement with DEC Staff's proposed condition that modified recommended Condition 115, ACWE's disagreement was based on the belief that it had already conducted all analysis necessary to identify proposed impacts to streams.[58] ACWE did not previously voice the objections it now voices in its brief on exceptions.

We conclude that ACWE's exceptions to those recommended Conditions are untimely. In Bluestone Wind, LLC (Case 16-F-0559), we held that issues sought to be raised for the first time in briefs on exceptions that could have been raised before the Examiners are untimely and not properly before the Siting Board for review and decision. If grounds exist for raising new issues in briefs on exceptions, we advised that we expected the proponent to provide justification for why the issue was not raised earlier in the proceeding or risk the

[56] Recommended Decision, pp. 43-44.

[57] Recommended Decision, p. 43.

[58] Tr. 62; Hrg. Exh. 279.

possibility that we may reject the issue as untimely raised.[59] Here, ACWE does not provide justification or good cause for raising these exceptions at this stage of the proceeding. Accordingly, by failing to present these late-raised issues to the Examiners during the hearing phase of this proceeding, ACWE has waived its objections on those grounds.

In any event, we agree with the Examiners that the conditions as proposed by DEC Staff are warranted to assure that impacts to streams from the Project's construction and operation would be avoided or minimized to the maximum extent practicable. We also note the we have adopted similar stream conditions in other matters.[60] We do, however, modify Condition 111 to provide for approval of the DEC Region 9 Natural Resources supervisor, as agreed to by ACWE and DEC Staff.

4. Freshwater Wetlands

As part of its review of the application filed pursuant to PSL Article 10, the Siting Board must apply Article 24 of the ECL (Freshwater Wetlands), and the implementing regulations outlined at 6 NYCRR Parts 663 and 664. With respect to surface waters, which include freshwater wetlands, any potential adverse environmental impact to these protected State

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[59] Case 16-F-0559, Bluestone Wind, LLC, - Wind Electric Generation Siting, Order Granting Certificate of Environmental Compatibility and Public Need, with Conditions (issued December 16, 2019) (Bluestone Wind Order), pp. 10-11.

[60] See Case 16-F-0062, Eight Point Wind, LLC – Wind Electric Generation Siting, Order Granting Certificate of Environmental Compatibility and Public Need, with Conditions (issued August 20, 2019) (Eight Point Wind Order), Attachment A, Condition 111, p. 57; Case 15-F-0122, Baron Winds, LLC – Wind Electric Generation Siting, Order Granting Certificate of Environmental Compatibility and Public Need, with Conditions (issued September 12, 2019) (Baron Winds Order), Appendix A, Condition 118, p. 56; Number Three Wind Order, Appendix A, Conditions 115 and 121, pp. 51 and 56.

resources from the construction and operation of the facility must also be minimized or avoided to the maximum extent practicable.[61]

The Examiners found that the Project area included State-regulated wetlands and seven ECL Article 24 unmapped jurisdictional wetlands subject to the review and protections of ECL Article 24 and 6 NYCRR Parts 663 and 664. The Examiners concluded that two of the unmapped jurisdictional wetlands (PUM1 and PUM6) were Class I wetlands for the purposes of this proceeding and entitled to the protections of Class I wetlands. The Project as proposed locates one turbine each in PUM1 and PUM6. The Examiners concluded that locating wind turbines or related infrastructures or facilities in a wetland is incompatible with wetland functions and benefits. Subject to the stipulations between ACWE and DEC Staff, and the imposition of the conditions, modifications and conclusions recommended by the Examiners, the Examiners concluded that the Project would avoid or minimize potential adverse impacts to wetlands and adjacent areas to the maximum extent practicable and comply with ECL Article 24 and 6 NYCRR Parts 663 and 664.[62]

ACWE takes exception to the Examiners' finding that unmapped jurisdictional wetlands PUM1 and PUM6 are Class I wetlands for the purpose of this proceeding. The Examiners based the finding on the Wetland Functions and Values Assessment Table (Application Appendix 22jd). ACWE argues that the Wetland Delineation Report (Application Appendix 22j) is not intended to be the sole source of information for classifying wetlands pursuant to 6 NYCRR §§ 664.4 and 664.5, and that classification assignments are made based on field visits and meetings with DEC

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[61] See PSL § 168(2)(a) and PSL § 168(3)(c).

[62] Recommended Decision, pp. 51-52.

Staff in addition to the information contained in the report. ACWE disagrees with the classification of PUM1 and PUM6 as Class I wetlands because:

- Within the functions and values assessment included in the Wetland Delineation Report, the majority of forested wetlands were labeled as having potential habitat for threatened or endangered species. This is entirely due to the DEC's default position that all forested habitat across the State is considered NLEB habitat. The functions and values assessment did not take into account exact locations of species within the Facility Site. Review of bat telemetry data and eagle nest data indicates the absence of rare species in these two wetlands and, therefore, their habitat potential should not be a qualifying factor for classification of these wetlands.[63]

- No threatened or endangered plant species were identified within the Facility site, therefore this should not be a qualifying factor for classification of these wetlands.[64]

- Comparing the location of these wetlands with Figure 23-1 of the Application, neither PUM1 nor PUM6 is associated with an aquifer. The closest aquifer is nearly 1-mile from both of these wetlands and it is not a Primary Aquifer. In comparison, the mapped DEC wetlands described in the Wetland Delineation Report and in Exhibit 22 rev1 are all within a mapped aquifer and have a classification between Class I and Class II.

- Comparing the location of these wetlands with Figure 23-4 of the Application, wetland PUM1 is nearly one mile from

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[63] Applicant notes that unmapped wetlands PUM1 and PUM6 are located on Sheets 3 and 75 of Appendix 22j, Figure 7; and comparing Sheets 3 and 75 with Confidential Figure 3-1 of Appendix 22h-1c and Confidential Figures 3 and 4 of Appendix 22h-1e confirms that NLEB and bald eagles were not observed in these unmapped wetlands. ACWE Brief on Exceptions, p. 34, n. 14.

[64] Applicant notes that this is confirmed by the letter ACWE received from the New York National Heritage Program referenced in Appendix 22a at page 3 and by a review of the DEC Environmental Resource Mapper: https://gisservices.dec.ny.gov/gis/erm/. ACWE Brief on Exceptions, p. 34, n. 15.

> the closest identified groundwater well and PUM6 is over 1.75 miles from the nearest identified groundwater well. Further, in comparing the mapped DEC wetlands described in the Wetland Delineation Report and in Exhibit 22 rev1 to the location of wells in Figure 23-4 of the Application, the mapped Class I wetlands are all within 500-feet of a water well, whereas the nearest mapped Class II wetland is over 2,000 feet from a well. Based on distance and precedent associated with mapped wetlands, unmapped wetlands PUM1 and PUM6 should be classified no higher than Class II.[65]

Therefore, ACWE concludes that the record does not support classifying PUM1 and PUM6 as Class I wetlands.

DEC Staff states that it does not take a position on ACWE's exception but requests that, if the Siting Board changes the classification recommended by the Examiners, DEC Staff be consulted in the ultimate determination. DEC Staff bases this request on Department Staff's extensive experience and intimate knowledge with the classifications of wetlands and notes that wetland classification requires a comprehensive analysis of available data and may require a field assessment.[66]

CCC argues that the wetlands are hydraulically connected to an aquifer used for public water supply and that ACWE acknowledges that private water wells in the project area tap into unconfined aquifers. Furthermore, CCC argues that ACWE cannot rely on the lack of site-specific data to conclude the unmapped wetlands PUM1 and PUM6 cannot be classified based on information in the record.[67]

Discussion

It is undisputed that unmapped freshwater wetlands PUM1 and PUM6 are jurisdictional wetlands entitled to the

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[65] ACWE Brief on Exceptions, pp. 33-34.

[66] DEC Staff Brief Opposing Exceptions, p. 10.

[67] CCC Brief Opposing Exceptions, p. 7-8.

protections of ECL Article 24. The Examiners concluded that wetlands PUM1 and PUM6 were Class I wetlands based on information provided in the Application. ACWE takes exception to classifying these wetlands without additional investigation, field visits and consultation with DEC staff. DEC staff does not oppose ACWE's exception and acknowledges that wetland classification often requires comprehensive analysis of the available data and field assessment.

A field assessment of PUM1 and PUM6 for the purposes of determining the classification of these two jurisdictional wetlands has not been conducted by the parties. Accordingly, we modify that portion of the Examiners' conclusion that ECL Article 24 wetlands designated PUM1 and PUM6 are Class I wetlands and direct ACWE, in consultation and coordination with DEC Staff and DPS Staff, to provide further analysis together with a field assessment of PUM1 and PUM6 to determine the proper classification of those wetlands as part of ACWE's compliance filings. Otherwise, we affirm the Examiner's conclusions including the conclusion that the activities proposed within PUM1 and PUM6 are incompatible with a wetland's functions and benefits.

5. Bats

Pursuant to 16 NYCRR § 1001.22(h), an applicant must: (1) identify and evaluate the expected environmental impacts of a proposed facility on avian and bat species and the habitats that support them; (2) propose a period of post-construction operation monitoring for potential direct and indirect impacts to avian and bat species and habitats; and (3) propose a plan to avoid or, where unavoidable, minimize and mitigate any impacts during construction and operation of the facility.

Additionally, as set forth under PSL § 168(3)(e), State environmental laws and regulations relating to threatened

and endangered species are binding upon an applicant. Accordingly, where an applicant proposes to engage in any activity that is "likely to result in the take or a taking of any species listed as endangered or threatened," the applicant must satisfy the requirements to obtain an incidental take permit in accordance with 6 NYCRR § 182.11. A "take" or "taking" is defined under 6 NYCRR § 182.2(x) to include the "killing," or "capturing," of any species listed as endangered or threatened, "and all lesser acts such as disturbing, harrying or worrying."

In Article 10 proceedings, incidental take permits are issued in the form of Certificate Conditions and Compliance Filings. An applicant must first demonstrate that it is impracticable to achieve full avoidance of the take of the listed species at issue. Where this showing is made, the applicant must then prepare an endangered or threatened species mitigation plan that will result in a net conservation benefit to the species. The mitigation plan is commonly referred as a net conservation benefit plan, or NCBP.[68]

In this proceeding, the listed bat species at issue is the Northern Long Eared Bat (NLEB). It is uncontested that the Project is proposed to be built within NLEB occupied habitat that contains at least 9 maternity roost trees in 7 unique roost locations, and that Project components are proposed within 1.5 miles of maternity roost sites. On the record of this proceeding, the Examiners concluded that the Project would likely result in the take of NLEB and ACWE did not demonstrate that full avoidance of a take of NLEB is impracticable. Therefore, the Examiners recommended that ACWE be required to

[68] Recommended Decision, pp. 54-55.

implement the full avoidance curtailment protocol supported by DEC Staff.[69]

ACWE excepts to the Examiners' recommendation regarding the imposition of full avoidance on several grounds, including: (i) the recommended curtailment regime is more ”severe” than regimes adopted in other Article 10 cases; (ii) the record demonstrates that compliance with DEC Staff’s curtailment protocol is not practicable; (iii) the Recommended Decision did not fully consider ACWE’s fatality estimates; and (iv) despite ACWE’s error in citing pre-sunset and post-sunrise bat activity data from another project, the Recommended Decision’s conclusions are in error.[70] We begin our analysis with ACWE’s second exception, and conclude by addressing ACWE’s arguments regarding consistency with Article 10 precedent.

i. Impracticability of the recommended curtailment regime

The Examiners recommended adopting DEC Staff’s proposed curtailment regime for full avoidance of operational impacts to NLEB as follows:

- From May 1 through June 30, wind curtailment at wind speeds at hub height of less than or equal to 5.0 m/s when the ambient air temperature is 50°F (10°C) or greater, from thirty minutes before sunset to thirty minutes after sunrise; and

- From July 1 through October 1, wind curtailment at wind speeds at hub height of less than or equal to 6.9 m/s when the ambient air temperature is 50°F (10°C) or

[69] Recommended Decision, pp. 69-72.

[70] ACWE also takes exception to what it argues is the RD’s improper deference to DEC’s technical staff (ACWE Brief on Exceptions, pp. 12-13). We do not agree with ACWE’s characterization of the Examiners’ analysis. Based on our review of the record and RD, we conclude that the Examiners’ based their recommendations on the weight of the evidence before them and, when appropriate, followed administrative precedent.

> greater, from thirty minutes before sunset to thirty minutes after sunrise.

The Recommended Decision found that full avoidance of construction impacts can be achieved by scheduling construction activities that have a significant risk of impact, such as tree cutting, only during the hibernation season; i.e., October 1 through March 31.[71]

If ACWE demonstrates full operational avoidance is impracticable, the Examiners recommended that the curtailment regime proposed by DPS Staff be adopted. The DPS proposed curtailment regime would require curtailment from July 1 through September 30 at wind speeds of 6.0 m/s or less, and conditions otherwise identical to those proposed by DEC. DPS Staff also recommended a curtailment regime of 5.5 m/s during May, June and October.[72]

ACWE proposed curtailment from May 15 to September 30, sunset to sunrise at hub height wind speeds of 5.0 m/s or less. ACWE claimed that this proposed curtailment regime would achieve full avoidance of NLEB take.[73]

In its brief on exceptions, ACWE argues that the record demonstrates that the curtailment regimes proposed by DEC Staff and DPS Staff are not practicable. ACWE asserts that the curtailment regimes proposed by DEC and DPS Staff would result in the loss of the Project's energy production potential and economic value in amounts greater than the 0.3% loss of energy

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[71] Recommended Decision, pp. 59-61, 71; Recommended Condition 60; Tr. 1052-1056.

[72] Recommended Decision, pp. 62, 71; Recommended Condition 62; Tr. 1217-1219.

[73] Recommended Decision, pp. 62-63; Hrg. Exh. 100, Application Appendix 22h3, p. 5.

potential associated with ACWE's 5.0 m/s curtailment regime.[74] ACWE asserts that the revenue loss impacts associated with the energy losses from the DEC Staff and DPS Staff curtailment regimes would be severe because the loss of revenues eats profit dollar-for-dollar.[75] ACWE takes exception to the lack of discussion in the Recommended Decision regarding these lost revenues and renewable energy production.[76] ACWE argues that the Recommended Decision did not address ACWE's argument that the curtailment regimes would result in foregone energy production and failed to assess the impact on the State's renewable energy goals.[77]

The calculations provided by ACWE identify the lost or foregone electrical generation for the various curtailment regimes in terms of lost MWh/year as well as ACWE's estimate of lost annual revenues due to foregone generation.[78] DPS Staff testified concerning its estimates of the impacts to revenue and energy production associated with ACWE's and DEC Staff's proposed curtailment regimes. DPS Staff estimated that the curtailment regime proposed by DPS Staff would represent a 1% impact to energy production and revenues.[79]

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74 ACWE Brief on Exceptions, p. 10. ACWE claims its specific estimates are confidential and are not provided here.

75 ACWE Brief on Exceptions, pp. 10-11.

76 ACWE Brief on Exceptions, p. 11.

77 ACWE Brief on Exceptions, p. 11-12.

78 Hearing Exh. 100, Application Appendix 22h3, p. 5; Tr. 332C-333C, 2104-2105.

79 Tr. 179C-180C, 1221-1222; Hrg Exh. 391. DPS Staff claims that its specific estimates concerning the impacts to revenue and energy production associated with ACWE's and DEC Staff's curtailment regimes are confidential and are not provided here.

Discussion

Although the Recommended Decision did not discuss Applicant's argument regarding the amount of lost revenue and foregone energy production, we overrule ACWE's exception to the Examiners' conclusion that ACWE failed to demonstrate that full avoidance of impacts to NLEB was impracticable. We have previously reviewed a similar argument that we must consider lost revenue and foregone energy production in determining whether full avoidance of impacts to a listed species is impracticable. In Canisteo Wind Energy, LLC, we noted that in "prior Article 10 proceedings, we have held that full avoidance is impracticable where an applicant demonstrates that the viability of the project would be jeopardized by the measures necessary to achieve full avoidance of NLEB."[80] Here we add, where endangered or threatened species entitled to the protections of 6 NYCRR Part 182 are present in the project area of a proposed wind facility, avoidance of impacts to those species is likely to involve lost revenues and lost energy production through construction and operational restraints, curtailment protocols, and the relocation or elimination of turbine sites. It is the applicant's burden to prove that full avoidance is impracticable because the viability of the project would be jeopardized. On this record, ACWE failed to meet its burden because lost revenues or profits, without more, is not enough to make that demonstration.

We also previously addressed the argument that we must consider foregone renewable energy production in determining whether full avoidance is impracticable and held that the siting

[80] Case 16-F-0205, Canisteo Wind Energy, LLC – Wind Energy Generation Siting, Order Granting Certificate of Environmental Compatibility and Need, with Conditions (issued March 13, 2020) (Canisteo Wind Order), p. 28.

and development of renewable energy facilities do not trump environmental laws. The Project must still comply with the State's environmental laws and regulations.[81]

For the foregoing reasons, we reject ACWE's exception to the conclusion reached by the Examiners. However, as in Canisteo Wind, we are affording ACWE the opportunity to demonstrate in a Compliance Filing that a 6.9 m/s curtailment regime will jeopardize the viability of the Project and, thus, is impracticable for purposes of Part 182. If ACWE can make the requisite showing of impracticability to the satisfaction of DEC and DPS Staff, ACWE shall, in consultation with DEC and DPS Staff, develop and file as a Compliance Filing a NCBP for the take of NLEB as a result of operation at curtailment speeds below 6.9 m/s. If ACWE is able to make the requisite showing, DEC and DPS are instructed to allow a cut-in speed that is appropriately protective of the species and consistent with our prior decisions on these questions.

Accordingly, we modify the Certificate Condition 62 to provide for ACWE to make a showing of impracticability, consistent with the discussion above.

ii. Bat Fatality Estimates

In its brief on exceptions, ACWE argues that the Recommended Decision did not fully consider ACWE's fatality estimates and asserts those estimates are the most reliable on the record. ACWE asserts that the Recommended Decision ignored testimony from ACWE's experts that a curtailment strategy of 5.0 m/s would result in no take of NLEB. ACWE asserts that the Examiners ignored evidence it proffered that showed "no NLEB fatalities have been observed in post-construction mortality monitoring at wind facilities operating under a curtail regime

[81] Canisteo Wind Order, p. 27.

with a 5.0 meter/second cut-in speed" and studies that have shown reduced fatality rates for all other bat species by 47-82%.[82]

In its exceptions, ACWE also argues that bat mortality should be based on the number of turbines rather than the generating capacity of the facility, that DEC's data set inappropriately used data from a facility that ACWE considers to be an outlier, and failed to consider the out-of-state data relied upon by ACWE. Furthermore, ACWE argues that DEC did not account for the mortality differences between NLEB and other bat species given ACWE's assertion that the species have different flight and foraging habits.[83] ACWE excepts from the calculation of NLEB mortality as a percentage of overall bat mortality. ACWE asserts that the Examiners' reliance on mortality estimates based on MW capacity rather than ACWE's proposed per turbine model amounts to a declaration that ACWE's methodology is in error simply because it does not follow precedent or the methodology used by DPS and DEC and recommended by the United States Fish and Wildlife Service (USFWS).[84] ACWE also takes issue with the Examiners' failure to address the testimony of ACWE's experts regarding the relationship between bat mortality and the rotor swept zone of turbines. ACWE argues that "the Siting Board has not previously addressed this testimony let alone refuted it. Here, the Siting Board must independently assess this testimony and the specific example provided and should conclude that the per-turbine metric is more reliable."[85]

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82 ACWE Brief on Exceptions, p. 13.

83 ACWE Brief on Exceptions, p. 13.

84 ACWE Brief on Exceptions, p. 14.

85 ACWE Brief on Exceptions, p. 16.

ACWE also argues that the Recommended Decision and DEC Staff failed to address ACWE's testimony that no NLEB fatalities have been observed or documented at projects subject to a curtailment regime. ACWE takes exception to the Examiners' reliance on DEC Staff's testimony and methodology.[86]

DEC Staff opposes ACWE's contention that ACWE's fatality estimates must be accepted as the most reliable on the record.[87] DEC Staff cites a previous Article 10 proceeding where the Siting Board approved DEC's take estimate and found DEC's methodology "is rational and is a more conservative approach based on New York-relevant data."[88] DEC Staff notes that incidental take permit determinations "will be based on the best scientific and other information that is reasonably available to the department" pursuant to 6 NYCRR § 182.12(a)(3). Some data from northeastern states – specifically Pennsylvania – is not readily available to DEC or able to be verified by DEC Staff. DEC staff argues that the Siting Board should not rely on unreliable information when making determinations pursuant to 6 NYCRR Part 182, and should, as appropriate, rely upon DEC Staff's take estimate and the Board's prior decisions. Furthermore, DEC Staff's take estimate calculation is based on post-construction reports provided to DEC and, until new or updated data become available, DEC Staff will apply this estimate of take towards each on-shore wind turbine proposal in New York State.[89]

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86 ACWE Brief on Exceptions, p. 16.

87 DEC Staff Brief Opposing Exceptions, p. 5.

88 DEC Staff Brief Opposing Exceptions, p. 5-6, quoting Baron Winds, at 77.

89 DEC Staff Brief Opposing Exceptions, p. 6.

Discussion

ACWE's experts acknowledge that operational curtailment of turbines is currently the most effective means by which to reduce bat fatalities.[90] To support its position that ACWE's proposed curtailment strategy will avoid all impacts to NLEB, ACWE relies on six studies in the Eastern and Mid Atlantic United States (Indiana, Maryland, West Virginia [2] and Pennsylvania [2]) that indicate curtailment at 5.0 m/s will reduce bat fatalities by 47%-82% and no NLEB fatalities have been observed in post-construction mortality monitoring at numerous facilities operating under a 5.0 m/s cut-in speed.[91]

In support of the argument that its per turbine estimation of bat fatalities is more reliable, ACWE's experts assert that tower height has more influence on NLEB fatalities than MW capacity because NLEB forage closer to the ground, stay in the forest canopy, and are weak fliers compared to other bat species. ACWE's experts, however, cite one study that finds tower height has no effect on bat mortality and three studies found an increase in bat mortality with taller turbines. ACWE's Bat Panel explains those studies were based on much smaller turbines than proposed today and it is unknown whether the same would hold true for the much taller turbines being used today.[92] Notwithstanding the previous studies and the unknown variables, ACWE's Bat Panel expects that higher turbines would have less impact because of the NLEB's general flying and foraging characteristics.[93] ACWE's conclusion, however, is not supported

[90] Tr. 1152.

[91] Tr. 1152-1153.

[92] Tr. 1153-1154.

[93] Tr. 1157.

on this record where there is documented NLEB fatalities at New York State wind farms.

ACWE's experts assert that NLEB fatalities should be determined based on the studies relied upon by ACWE that have shown no NLEB fatalities at turbines curtailed at or above 4.0 m/s and other studies that found no NLEB fatalities at 5.0 m/s. ACWE's Bat Panel testimony does not indicate whether those studies involved wind facilities with known NLEB maternity roosts located within 1.5 miles of wind turbines as are present in this matter. In addition, ACWE's NLEB emergence data demonstrates that NLEB emerged when wind speeds were in excess of 4 m/s and 5 m/s (9-11 mph).[94] Accordingly, little weight should be given to the evidence presented by ACWE.

ACWE also argues that DEC does not provide any evidence that NLEBs have been killed at wind energy facilities in New York or elsewhere operating under a curtailment strategy regardless of cut-in speed. ACWE's experts, however, acknowledge that there are no peer-reviewed scientific studies that have calculated the effectiveness of curtailment strategies on Myotis bats.[95]

ACWE's Bat Panel testified that, with the project built within NLEB maternity habitat there is an increased likelihood that NLEB may fly near operational turbines, but it is unknown whether this will lead to increased take of NLEB. Nonetheless, ACWE's Bat Panel does not expect NLEB to fly within the rotor swept zone.[96] ACWE's Bat Panel, however, acknowledged that there have been no studies that compare and contrast the various turbine size rotor swept zones and their respective

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[94] Hrg. Exh. 98, App. Appendix 22h1e.

[95] Tr. 1166.

[96] Tr. 1175.

correlation to bat fatalities.[97] The record demonstrates that NLEB fatalities have been documented at wind farms in New York State. Accordingly, ACWE's expectation that NLEB will not fly within the rotor swept zone of turbines is not supported.

We reject ACWE's argument that bat fatalities should be calculated on a fatalities per turbine basis and should include an analysis of the rotor swept zone. To date, ACWE admittedly has not selected the final wind turbine model for this Project. Accordingly, in addition to the reasons stated by the Examiners that support a calculation on a fatalities per MW basis, we conclude that the per MW calculation is a more reliable method of calculation when the number and size of turbines to be used is unknown, as is any calculation of the rotor swept zone. In addition, we conclude that the weight of record evidence demonstrates that NLEB are likely to be killed by wind turbines without curtailment.

We have previously found reliable DEC staff's method of calculating bat mortality due to turbine collisions, in general, and NLEB mortality, in particular. That method is based on data from post-construction studies performed at sixteen New York wind farms and one wind farm located in Ontario, Canada, and calculated on a per MW basis. Notwithstanding ACWE's exception to the Recommended Decision's reliance on this underlying data, we find nothing in the record that supports ACWE's reliance on data from studies in other states that cannot be confirmed by DEC staff.

We agree with the Examiners' determination that the proposed per MW bat fatality rate proposed by DEC Staff and DPS Staff, rather than the per turbine fatality rate proposed by ACWE, should be used. As the Examiners note, both DEC Staff and

[97] Tr. 1199-1200.

DPS Staff support the use of the per MW calculation and prior Article 10 cases have consistently used the per MW calculation in the take analysis. As the Examiners explained, according to USFWS, fatalities should be expressed on a per nameplate MW basis if comparing species fatality rates among projects, because it is a better metric for comparing fatality rates among different sized turbines and turbines from different manufacturers.[98] Moreover, as noted above, the Examiners concluded that ACWE does not know how many turbines it will ultimately use to generate the name plate capacity, which adds additional uncertainties in determining bat fatalities using ACWE's per turbine methodology or by consideration of rotor swept zones. Accordingly, we overrule ACWE's exception to the Recommended Decision's conclusions regarding bat fatality estimates.

iii. Timing of curtailment

ACWE takes exception to the discussion in the Recommended Decision of the credibility of the testimony of ACWE's experts regarding the emergence of NLEB before and after sunset. ACWE notes that, although "[t]he RD correctly observes that ACWE's bat experts [incorrectly] referred to bat emergence data from the Canisteo Wind Energy Project (CWE Project) in their description of bat activity prior to sunset and following sunrise" as being associated with the ACWE Facility Site (RD at 66-67), reference to the data being associated with the ACWE was inadvertent.[99]

In its Brief Opposing Exceptions, DEC Staff argues that ACWE has conceded that NLEB emerge prior to sunset and can

[98] Recommended Decision, pp. 63-64; DEC Staff Brief Opposing Exceptions, p. 5.

[99] ACWE Brief on Exceptions, pp. 16-17.

no longer argue that there is no risk to NLEB during this time. DEC Staff argues the record supports curtailment beginning before sunset. DEC Staff notes that prior Siting Board decisions have rejected a curtailment period of astronomical dusk and dawn and, instead, adopted a curtailment period of thirty minutes before sunset to thirty minutes after sunrise. ACWE, according to DEC Staff, has not justified a departure from previous Siting Board decisions.[100]

Discussion

Even acknowledging the inadvertency of a subset of testimony from ACWE's bat experts, the documentary evidence admitted in the case clearly shows that a significant percentage of NLEB emerge before sunset. The Examiners, for example, found that ACWE's own telemetry study and ACWE's NCBP both indicate that a portion of NLEB population in the Project area emerge before sunset.[101] More specifically, ACWE's Application materials show that between 13% and 27% of the total NLEB emergences from four different roosts in the Project area occur before sunset.

Notwithstanding ACWE's attempt to portray this evidence in a different light, we conclude that the telemetry evidence admitted in the case supports the Examiners' proposed finding. In accordance with this finding, and consistent with other cases, curtailment of ACWE's wind turbines shall commence thirty minutes before sunset and continue until thirty minutes after sunrise.

iv. Consistency with Article 10 precedent

Referencing five Article 10 cases, ACWE argues that the curtailment protocol recommended by the Examiners "is more

[100] DEC Staff Brief Opposing Exceptions, pp. 6-7.

[101] Recommended Decision, pp. 66-67.

severe than any adopted to date."[102] ACWE notes that while the five referenced certificates included curtailment protocols to be included with a NCBP, none of them imposed any curtailment requirements outside the July 1 to October 1 period. With respect to curtailment wind speeds, ACWE notes that three certificates imposed a 5.5 m/s cut in speed, one imposed a 5.0 m/s cut in speed, and one imposed a 6.0 m/s cut in speed. ACWE asserts that no evidentiary basis supports this disparate treatment. Accordingly, ACWE requests that the Siting Board its proposed curtailment protocol using a 5.0 m/s cut in speed. In the alternative, ACWE argues that the Siting Board should adopt the curtailment protocol and related provisions adopted in Eight Point Wind, Bluestone Wind, and Number Three Wind, each of which used a 5.5 m/s cut in speed.[103]

In its brief opposing exceptions, DEC Staff asserts that curtailment is necessary during the additional months of May and June in this case to avoid NLEB impacts given the presence of NLEB occupied habitat in the Project area. DEC Staff notes none of the five cases cited by ACWE involved projects located in NLEB occupied habitat. DEC Staff also notes that the Certificate issued in Canisteo Wind adopted the same recommended curtailment regime that was approved in the Recommended Decision in this proceeding.[104]

Discussion

ACWE's argument that the curtailment regime recommended in this proceeding is inconsistent with precedent and unsupported by the record is unpersuasive. As an initial matter, we have consistently held that a 6.9 m/s cut in speed is

[102] ACWE Brief on Exceptions, pp. 8-9.

[103] ACWE Brief on Exceptions, pp. 9-10.

[104] DEC Staff Brief Opposing Exceptions, p. 5.

required to fully avoid impacts to NLEB.[105] We also note that we imposed the 6.9 m/s curtailment regime in Canisteo Wind while allowing Canisteo the opportunity to develop in a compliance filing a NCBP for NLEB at a cut-in speed below 6.9 m/s.[106] This is the same curtailment regime we approve here.

The cases cited by ACWE that approved cut-in speeds below 6.9 m/s are distinguishable from this matter. The three matters in which a 5.5 m/s cut-in speed was approved -- i.e. Eight Point Wind,[107] Number Three Wind,[108] and Bluestone Wind[109] – were all the result of settlement negotiations among the applicants, DEC Staff, and DPS Staff. Similarly, the approval of the 5.0 m/s curtailment regime in Cassadaga Wind was based upon the express willingness of DEC and DPS Staff to evaluate and potentially approve a NCBP using the lower curtailment wind speed.[110]

Baron Winds, in which we approved a 6.0 m/s cut-in speed, is also distinguishable from this case. In that case, we concluded that Baron demonstrated on the record that a 6.9 m/s curtailment regime was impracticable because it would result in a negative net present value for the project, thereby threatening project viability.[111] We approved the 6.0 m/s curtailment regime based upon DPS Staff's proof that that cut-in speed was necessary to minimize impacts to migratory tree bats

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105 See e.g. Case 14-F-0490, Cassadaga Wind LLC – Wind Electric Generation Siting, Order Granting Certificate of Environmental Compatibility and Need, with Conditions (issued January 17, 2018) (Cassadaga Wind Order), p. 53.

106 Canisteo Wind Order, Appendix A, Condition 63.

107 Eight Point Wind Order, Attachment A, Condition 34.

108 Number Three Wind Order, Appendix A, Condition 62.

109 Bluestone Wind Order, Attachment A, Condition 67.

110 Cassadaga Wind, p. 54.

111 Baron Winds Order, pp. 74-75.

to the maximum extent practicable.[112] In this case, as discussed above, we conclude that ACWE has not demonstrated on this record that the 6.9 m/s curtailment regime is impracticable.

With respect to curtailment during May and June, we disagree that the extension of the curtailment period is not supported by the record. The presence of breeding NLEB and NLEB maternity roost trees was documented in the Project area, and DEC Staff provided testimony regarding the activities of NLEB around those sites during the May and June maternity period.[113] Thus, the record supports extension of the curtailment period to May and June, albeit at the lower curtailment speed of 5.0 m/s. In contrast, in the five cases cited by ACWE, NLEB occupied habitat was not present in the project areas and, thus, curtailment was not necessary for the May and June maternity period.

v. Conclusion

In sum, as noted above, we modify Certificate Condition 62 to provide ACWE the opportunity to demonstrate in a Compliance Filing that the 6.9 m/s curtailment regime is impracticable and to develop, in consultation with DEC and DPS Staff, a NCBP for the take of NLEB as a result of operation at a curtailment speed below 6.9 m/s. We also adopt the other proposed Certificate Conditions and Attachment A Package requirements relating to NLEB and other bat species, as recommended by the Examiners. Based upon the proposed Certificate Condition as modified, we conclude that Project construction and operation will comply with the State Endangered Species Act with respect to NLEB, and will minimize impacts to all bat species to the maximum extent practicable.

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[112] Baron Winds Order, p. 76.

[113] Tr. 1035, 1039, 1044-1045, 1048-1049, 1054-1055.

6. Bald Eagles

Section 1001.22(h) of the Article 10 regulations also applies to the analysis of impacts to bald eagles. In this respect, the Recommended Decision concluded that Project operation will result in a take of bald eagles and recommended that ACWE be directed to submit a Net Conservation Benefit Plan for the estimated take of forty-one bald eagles over the thirty year life of the Project.[114] ACWE excepts from that conclusion, stating that the Examiners are advising the Siting Board to abdicate its responsibilities to DEC Staff and the Recommended Decision creates a standard not found in DEC's regulations found at 6 NYCRR § 182.11.

ACWE takes exception to a statement made in the Recommended Decision that its expert witness did not offer an alternative take estimate. ACWE asserts that its expert provided an estimate of zero takes and concluded that operation of the Project would result in full avoidance. Referencing DEC Staff's testimony that bald eagles have established nests in close proximity to golf courses and department store parking lots, ACWE further asserts that the Siting Board should account for the "evident ability of bald eagles to adapt to the human environment" and reject the Examiners' recommendation.[115]

ACWE argues that DEC Staff's prediction that the bald eagles' nests would be unproductive or if productive still result in the loss of 1.3 bald eagles per year is unsupported in the record. For example, ACWE claims that DEC Staff's estimate is undermined by the alleged failure of DEC witnesses to present evidence that eagles cannot avoid collision with the proposed turbines. ACWE asserts that DEC Staff failed to present a prima

[114] Recommended Decision, p. 82.

[115] ACWE Brief on Exception, p. 28.

facie showing that the Project would result in an incidental take.[116]

DEC Staff argues that ACWE misconstrues information regarding bald eagles and the threat wind energy facilities pose to bald eagles. In particular, DEC notes the distinction regarding bald eagles' tolerance for human activity, including farming activity, and the potential threat posed by ACWE's wind energy facility, parts of which are to be located in close proximity to an active bald eagle breeding nest.[117]

Discussion

We agree with DEC's analysis of the potential impacts of the Facility on bald eagles, particularly given the close proximity of Facility components to several existing eagle's nests. As discussed by the Examiners, the Project includes one active breeding eagle's nest in the center of the Project area and an additional six active breeding nests located within 1.6 miles to 9.5 miles from proposed turbines. The five closest turbines to the active nest in the center of the Facility site are 0.8, 0.8, 1.0, 1.0 and 1.0 miles, respectively from the nest.[118]

We have reviewed Application Exhibit 22 and note that ACWE identified the potential collision risk for birds in general and bald eagles, but the Application did not adequately evaluate the Facility's expected impacts on bald eagles or demonstrate that the proposed Facility will avoid all impacts to Bald Eagles. The Application discusses some measures to be taken to minimize impacts to bald eagles and other raptors, such as the removal of carrion and carcasses to avoid attracting

[116] ACWE Brief on Exceptions, p. 29.

[117] DEC Staff Brief Opposing Exceptions, p. 10.

[118] Recommended Decision, pp. 72-73.

eagles and raptors.[119] The Application recognizes that bald eagles utilize the Facility site during all seasons, and "[d]epending on the level of activity at the nest ACWE could, in coordination with the USFWS and NYSDEC, implement operational measures to reduce collision risk to eagles."[120]

ACWE also acknowledged that the "presence of the turbines will result in a long-term collision risk to bird and bat populations" and that "ACWE has developed avoidance and minimization measures to ensure that no significant impacts occur to federal and state listed species."[121] Although the Application states that "ACWE assessed the potential take or mortality to bird and bat populations through a collision risk assessment,"[122] it lacked any specific assessment of the collision risk for bald eagles. In other places, ACWE acknowledges that "the operation of the windfarm may result in direct impacts to wildlife through collision with wind turbines and resultant mortality or injury . . . [and] [i]ndirect impacts may also occur through functional habitat loss and modification."[123]

ACWE's expert similarly does not address the likelihood of a take of bald eagles or whether impacts to bald eagles would be fully avoided, although he testified that the DEC Bald Eagle Panel's take estimates were overly conservative and speculative, and "wind turbines do not pose a barrier to eagle flight as they can navigate above and around them as necessary given enough sight time."[124]

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[119] Hearing Exh. 248, Application Exh. 22, pp. 17 and 28.

[120] Hearing Exh. 248, Application Exh. 22, p. 36.

[121] Hearing Exh. 248, Application Exh. 22, p. 13.

[122] Hearing Exh. 248, Application Exh. 22, p. 13.

[123] Hearing Exh. 248, Application Exh. 22, p. 13.

[124] Tr. 1489.

By contrast, this part of the Recommended Decision was based on a number of proposed findings, including (i) the presence of an existing active breeding nest in the center of the Facility site and other breeding nests within near vicinity of the site, (ii) the ability of the nesting pair to maintain their breeding territory after it is surrounded by wind turbines, (iii) the ability of the nesting pair to get to and from foraging habitat, and (iv) the ability of the nesting pair to successfully fledge young. Indeed, DEC Staff's estimate that on average annual productivity of nesting eagles in New York State is 1.3 fledglings per nest is supported by evidence that, as recent as 2019, the nest in question successfully fledged two chicks. In addition, five of the other six nests adjacent to the Project area fledged two chicks each in 2019.[125]

This and other evidence identified by the Examiners led them to propose a finding that the Project would result in the estimated taking of 41 bald eagles over the Project's thirty-year proposed life span. Based on this proposed finding, the Examiners recommend that ACWE be directed by the Siting Board to submit as a Compliance Filing a final NCBP for the take of 41 bald eagles over the life of the Project (recommended Condition 63) and comply with the construction, operation and reporting requirements of recommended Conditions 95, 96 and 97 and the monitoring requirements of Package 24, as modified by the Examiners.[126]

Based on our review of the record, we conclude that the weight of record evidence supports the finding that Project construction and operation will likely result in the take of the threatened bald eagle and, therefore, a NCBP and other

[125] Recommended Decision, pp. 73-74.

[126] Recommended Decision, p. 83.

protective conditions and monitoring related to the protection of bald eagles is required consistent with the recommendations of the Examiners. We find that subject to these conditions and monitoring requirements, ACWE would mitigate to the maximum extent practicable those impacts to bald eagles discussed herein.

7. Upland Sandpipers

ACWE excepts to the Examiners' determination that four of the Project's turbines would result in the take of the State-listed threatened upland sandpiper by the location of those turbines in areas that DEC Staff designated as upland sandpiper occupied habitat. ACWE makes interrelated arguments related to the Recommended Decision, including that it relies inappropriately on the opinions of DEC Staff, erroneously adopts a requirement not found in DEC's regulations implementing the Endangered Species Act for an applicant to undertake three years of targeted surveys to establish the absence of a threatened grassland bird species, and erroneously concludes that occupied habitat related to upland sandpiper is synonymous with suitable habitat for that species.[127]

More specifically, ACWE argues that "the record is void of factual evidence that Upland Sandpiper occupies any of the Facility Site,"[128] and that DEC is using the three-year survey requirement to fill the missing factual information. ACWE claims DEC's three-year survey protocol is not required or even advised pursuant to any regulation or guidance document, and that it thus lacked notice regarding the protocol. For this reason, ACWE argues that the protocol is not binding on ACWE or the Siting Board. ACWE further argues that DEC failed to

[127] ACWE Brief on Exceptions, p. 19.

[128] ACWE Brief on Exceptions, p. 20.

justify with scientific evidence why the Siting Board should endorse a three-year requirement not found in regulation or guidance document.[129]

Relatedly, ACWE argues that the record lacks evidence of upland sandpiper exhibiting essential behavior in the Project area. To support its argument, ACWE references the breeding bird surveys it conducted in 2018 and 2019 that it asserts show a lack of presence of upland sandpiper in the Project Area. ACWE argues that these surveys should suffice to prove that the Project area does not contain occupied habitat. ACWE notes that the Recommended Decision, by contrast, ignored these surveys in favor of DEC witness testimony opining that, based on a survey dating to 2002, it is highly probable that upland sandpiper and other threatened and endangered grassland bird species were present during the most recent breeding season.[130]

Given the absence of evidence of the presence of upland sandpiper in the Project area for eighteen years, ACWE argues that the opinions offered by DEC witnesses amount only to a determination that the area constitutes "suitable habitat" for the species but that, for purposes of the Endangered Species Act, such a determination is irrelevant to whether a regulated activity would constitute a taking.[131] ACWE urges the Siting Board to find – based on its 2018 and 2019 surveys – "that reoccupation by that species is unlikely (6 NYCRR 182.2[o])."[132]

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[129] ACWE Brief on Exceptions, p. 20.

[130] ACWE Brief on Exceptions, pp. 21-22.

[131] ACWE Brief on Exceptions, pp. 22-23.

[132] ACWE also asserts that DEC Staff failed to provide ACWE with suggestions on targeting upland sandpiper in its surveys, despite pre-survey consultations it had with agency personnel in May 2018. ACWE Brief on Exceptions, pp. 23-24.

In sum, ACWE argues that the Siting Board should reject DEC Staff's three-year rule and conclude as a factual matter that the Project area does not constitute occupied habitat of the upland sandpiper.[133]

DEC Staff argues that the Recommended Decision correctly made record-based findings and applied the regulatory and statutory requirements in concluding that occupied upland sandpiper habitat is present in the Project area. DEC Staff specifically references its reply brief in support of the three-year survey requirement for establishing that reoccupation of habitat by the upland sandpiper is unlikely under the regulation.[134]

In its brief opposing exceptions, CCC argues, among other things, that the applicable rules deem suitable habitat occupied when it has been occupied in the past, remains at present suitable habitat, and there is no demonstration of absence of the species. According to CCC, there is no dispute that all three factual elements have been met, therefore Applicant's attempt to turn this into a battle of the experts is misplaced.[135] CCC also argues that the Application lacks information regarding the location of the Project components necessary to allow the Siting Board to determine impacts to upland sandpiper.[136]

Discussion

ACWE's exceptions are sustained. Pursuant to 6 NYCRR § 182.2(o), "occupied habitat" is an area within which a listed species has been determined to exhibit one or more essential

[133] ACWE Brief on Exceptions, pp. 24-25.

[134] DEC Staff Brief Opposing Exceptions, pp. 7-8.

[135] CCC Brief Opposing Exceptions, pp. 5-6.

[136] CCC Brief Opposing Exceptions, pp. 8-9.

behaviors, such as breeding, hibernating, reproduction, feeding, sheltering, migration and overwintering.[137] The regulation further provides that once habitat is identified as the occupied habitat of a listed species, it remains occupied habitat until it is demonstrated that the habitat is either no longer suitable for that species or until monitoring of that habitat indicates that reoccupation by that species is unlikely. In this case, DEC Staff identified upland sandpiper occupied habitat in the Project area based upon documented breeding records, and confirmed in 2019 that the identified habitat remains suitable for the species.[138] Accordingly, to establish that the identified habitat is no longer "occupied habitat," ACWE must demonstrate that reoccupation of the areas previously occupied by upland sandpiper is unlikely.

DEC Staff contends that ACWE's two breeding bird surveys were inadequate to demonstrate the likely absence of upland sandpipers because they were not the targeted three-year surveys required by DEC's protocols. However, ACWE did not have notice of DEC's unpublished three-year survey protocol requirement until DEC Staff filed its pre-filed testimony in October 2019. At the time ACWE obtained DEC approval for its breeding bird study plan in May 2018 during the pre-application phase of this proceeding, DEC notified ACWE that it had data from 2002 regarding breeding upland sandpipers in two locations within the Project area.[139] Based on DEC's comments, ACWE adjusted its breeding bird surveys to take this into account.[140] However, no mention was made of the existence of occupied

[137] 6 NYCRR § 182.2(f), (o).

[138] Recommended Decision, p. 85.

[139] Tr. 1463-1464.

[140] Tr. 1463-1464.

habitat in the Project area, or of the three-year targeted survey requirement.[141] Even after ACWE filed its Application, the February 2019 application deficiency determination did not cite either the Application's analysis regarding grassland birds or the lack of a three-year targeted survey as a basis for the deficiency determination. Because ACWE was not provided meaningful notice of the three-year survey requirement at a time when it could have reasonably been addressed, the lack of such a survey provides no valid basis in this case for concluding that ACWE failed to make the requisite demonstration.

Based on this record, which includes the surveys ACWE conducted pursuant to the study plan that DEC approved in this case, we conclude that the weight of the evidence demonstrates that upland sandpiper are unlikely to reoccupy areas previously identified as occupied habitat. The last known observations of breeding upland sandpiper occurred in 2002.[142] DEC has no record of any observations of upland sandpiper in the Project area since 2002.[143]

The surveys conducted by ACWE failed to observe upland sandpiper in the Project area. The 2018 and 2019 breeding bird surveys conducted by ACWE included survey points within the two areas DEC Staff identified as upland sandpiper occupied habitat but did not identify upland sandpiper in either area.[144] In addition, ACWE conducted monthly large bird surveys for two years from July 2017 to June 2019 that included survey points within the two areas identified by DEC Staff. These surveys also failed to identify upland sandpiper in the areas, although

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[141] Tr. 1463, 1509-1510.

[142] Tr. 1467.

[143] Tr. 1434-1435, 1465; Hearing Ex. 325.

[144] Tr. 1463-1464, 1470-1471.

they did identify other non-protected grassland bird species.[145] That other grassland bird species were identified in surveys focused on large birds shows the comprehensive and specific nature of the surveys.

Given that ACWE's recent surveys, conducted by ACWE pursuant to the DEC-approved study plan in this case, identified no upland sandpiper in the areas identified as occupied habitat, and the overall lack of any recorded observation of upland sandpipers from 2002 to 2019, the weight of record evidence supports the conclusion that reoccupation by the species is unlikely. Accordingly, we conclude that the habitat previously identified is no longer "occupied habitat" pursuant to 6 NYCRR § 182.2(o).

As a result, construction of the four subject turbines would not result in the take of upland sandpiper occupied habitat and, therefore, a NCBP for the species is not required. Accordingly, we strike proposed Certificate Conditions 64 and 95(b).[146] We note, however, that Certificate Condition 96 is included to address encounters with listed species in the event they occur during Project construction. Based upon this Condition, which would apply in the event upland sandpipers are encountered, we conclude that the Project will be constructed in compliance with State Endangered Species law and regulation, and that potential impacts to upland sandpiper will be avoided or minimized to the maximum extent practicable.

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[145] Tr. 1470-1471; Hearing Ex. 95; Hearing Ex. 275.

[146] Because we are striking Certificate Conditions 64 and 95(b), DAM Staff's exceptions to the Recommended Decision are rendered academic.

B. Environmental Justice – PSL § 168(2)(d) and (3)(d)

An Article 10 application must include "an evaluation of significant and adverse disproportionate environmental impacts of the proposed facility, if any, resulting from its construction and operation" on environmental justice (EJ) areas, in accordance with 6 NYCRR Part 487.[147] Environmental justice or EJ is defined as the "fair treatment and meaningful involvement of all people regardless of race, color, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies."[148] An environmental justice area or EJ area is defined as "a minority or low-income community that may bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies."[149]

Part 487 applies to all persons seeking a certificate of environmental compatibility and public need pursuant to PSL Article 10. An applicant must define the impact study area pursuant to 6 NYCRR § 487.4 and determine whether the impact study area contains one or more EJ areas. If an EJ area is present within the impact study area, the applicant must undertake a full EJ analysis that complies with the requirements of 6 NYCRR § 487.6. Section 487.6 provides the general requirements and procedures for completing an EJ analysis, including pre-application requirements to ensure early and meaningful public involvement; required contents of the preliminary scoping statement; and required contents of an

147 PSL § 164(1)(f).

148 6 NYCRR § 487.3(k).

149 6 NYCRR § 487.3(l).

application. Pursuant to Sections 487.8 and 487.10, the applicant is required to compare the potential significant and adverse environmental impacts on comparison areas such as adjacent communities with the potential significant and adverse environmental impacts on the impact study area. The impact study area must include, at a minimum, the geographic area that is encompassed within a one-half mile radius around the proposed facility.[150] Comparison areas must include the county in which the facility is proposed to be located and adjacent communities, which are geographically contiguous to and surrounding the impact study area.[151]

ACWE identified two environmental justice areas near the proposed facility, and concluded that one, Census Block Group ID 360039503002, is within the impact study area. The identified EJ community includes the Town of Centerville, which would host, as proposed, 36 turbines. DEC Staff provided testimony that the EJ community would experience disproportionate adverse noise impacts and that State lands within the EJ community would experience disproportionate visual impacts.

The Examiners concluded that the record did not support the analysis of the DEC EJ Panel, and recommended that the Siting Board adopt the modifications to the post-construction noise monitoring plan and documentation of noise modeling requested by the Town of Centerville and adopt the Certificate Condition requested by the Town of Centerville relating to compliance with all requirements of Town of Centerville Local Law No. 1 of 2018.

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[150] 6 NYCRR §§ 487.3(o), 487.4.

[151] 6 NYCRR §§ 487.3(e), 487.8.

In its brief on exceptions, ACWE does not take exception to the Examiners' recommendation, but states that the Examiners' characterization of ACWE's EJ analysis is incorrect. We have reviewed what ACWE refers to as the Examiner's characterization of ACWE's EJ analysis, ACWE's EJ analysis and the relevant provisions of 6 NYCRR § 487. We agree with the Examiners.

DPS Staff takes exception to the modification of the post-construction monitoring plan requested by the Town of Centerville because DPS Staff's protocol already proposed two tests: one in the leaf-on season and one in the leaf-off season. DPS Staff believes recommended Condition 70 implicitly satisfies the Town's request without needing to modify the sound testing protocol.[152]

In its brief on exceptions, the Towns of Freedom and Farmersville take exception to the Examiners' finding that impacts to the EJ area will be minimized and mitigated to the maximum extent practicable because ACWE's failure to perform the required analysis is not a curable defect, and the Examiners acknowledge that the DEC EJ Panel's analysis did not and could not satisfy ACWE's obligation. The Towns argue that the Certificate cannot be granted, and the Application must be dismissed.[153]

In its brief opposing exceptions, ACWE opposes DPS Staff's exception to the modification of the post-construction monitoring plan and claims that a leaf-on sound level compliance test serves no purpose and would require more testing and data

[152] DPS Staff Brief on Exceptions, p. 4.

[153] Freedom and Farmersville Brief on Exceptions, pp. 11-12.

analysis to eliminate background noise created by rustling leaves.[154]

Furthermore, ACWE opposes the exceptions taken by the Towns to the Recommended Decision's conclusion that impacts to the EJ area will be minimized and mitigated to the maximum extent practicable and the Project will not result in a significant and adverse disproportionate impact to an EJ area. Regarding the Towns' argument that the Application should be denied because of the lack of a full EJ analysis, ACWE argues the Towns' exception is analogous to an eleventh hour procedural argument made by a party after the court has decided the matter on the merits. ACWE also argues that the Towns' exception is baseless because the PSS and Application provided ample information regarding the potential impacts of the proposed Project on the EJ area. Other than one update to the PSS, no other party, including the Towns, provided comments on the EJ areas.[155]

Discussion

We agree with DPS Staff that Condition 70's requirement of two sound compliance tests during the first year of operations, one in the "leaf-on" season and the other in the "leaf-off" season, adequately addresses the Town of Centerville's request, which also sought two tests during the first year of operations. ACWE's objection to conducting a test during the "leaf-on" season, belatedly raised for the first time in response to DPS Staff's exception rather than in its own exceptions, is unpersuasive. As noted by DPS Staff, we have consistently required testing during leaf-on and leaf-off seasons in Certificates issued under Article 10. Accordingly,

[154] ACWE Brief Opposing Exceptions, p. 8.

[155] ACWE Brief Opposing Exceptions, pp. 19-21.

DPS Staff exception is sustained, and the post-construction noise monitoring plan is modified as requested by DPS Staff.

With respect to the Towns' exceptions to the Examiners' EJ analysis, the Towns did not raise these issues before the Examiners and, thus, they are being raised improperly for the first time on exceptions. Accordingly, the exceptions are untimely.[156] In any event, the Examiners' conclusions and recommendations regarding the Project's impacts on the EJ area in the Town of Centerville are fully supported by the record. Accordingly, the Towns' exceptions are overruled.

C. Public Health and Safety - PSL § 168(2)(b)

1. Noise: Pre-Construction Noise Modeling

ACWE takes exception to the RD's findings that the pre-construction noise modeling parameters are insufficiently conservative because the Applicant selectively applied a limited portion of the CONCAWE meteorological correction without employing the entire correction. ACWE contends that the Examiners misapprehend the Applicant's use of the ISO modeling standard and therefore mistakenly concluded that ACWE should have employed the full complement of associated meteorological corrections.

ACWE states that the K4 meteorological correction it applied in its modeling is the entire meteorological correction available and that there are no additional meteorological corrections available within the CONCAWE modeling method. The Applicant maintains that CONCAWE and ISO 9613-2 are independent modeling methods that accomplish the same objective: estimating how sound propagates with distance while interacting with ground and atmosphere. ACWE states that the ISO 9613-2 model that it

[156] Bluestone Wind Order, pp. 9-11.

relied on assumes favorable conditions in that it assumes all receptors ae downwind from all turbines or that a moderate temperature inversion exists creating conservative results reasonable for estimating short-term worst case sound levels, but not appropriate for estimating annual levels. The Applicant notes that it used the CONCAWE K4 correction to moderate the tendency of the ISO model to over-predict long-term noise levels. ACWE maintains that the modeling it used is consistent with that employed in the modeling for the Cassadaga and Baron wind facility projects.

DPS Staff opposes ACWE's exceptions. DPS Staff states that its concern was that the Applicant used only the K meteorological correction, but that CONCAWE includes many noise modeling corrections, not limited to meteorological conditions, that act in concert to provide accurate results. DPS Staff takes issue with the Applicant's unilateral decision to apply only the meteorological correction to its modeling results while ignoring all the other aspects that the CONCAWE corrections make.

DPS Staff notes, for example, that while ACWE applied the K4 meteorological correction, it did not apply K3 pertaining to the ground effects or K5 pertaining to the height of the sound source. DPS Staff argues that, therefore, the Applicant's results are not reliable because its results combine an unacceptable hybrid between the ISO and CONCAWE models. To support its position, DPS Staff points to the manufacturer's notes that state because K4 emulates a distinct meteorological condition, it is unclear what effect the use of the K4 correction with the ISO model's downwind approach has on accuracy. DPS Staff concludes by noting it supports the Examiners' recommendation that the model should use the entirety of the CONCAWE corrections rather than simply adjusting

meteorological corrections, but that it supports an alternative of using the ISO 9613-2 standard in conjunction with a methodology based on conversion factors employed by Van den Berg as approved in the Bluestone Wind and Deer River matters.

CCC also opposes ACWE's exception. CCC notes that the selective application of the K4 correction simply means that the Applicant did not use the ISO 9613-2 modeling standard, by a hybrid methodology the practical effect of which is simply to add a 2dB downward adjustment to the ISO 9613-2 results. CCC notes that the CONCAWE guidelines were developed for assessing noise from petrochemical plants. CCC argues, that the corrections related to atmosphere in the meteorological K4 therefore apply to sound sources below 30 meters (approximately 100 feet), not the greater than 135 meters (approximately 450 feet) of modern wind turbines. CCC maintains that the K4 correction is incorrectly applied because the conditions of interest include much higher noise sources that operate when near-ground-level wind speeds are lower than those sufficient to operate the turbines at full power.

CCC also argues that ACWE's correction is contrary to the Siting Board's regulations at 16 NYCRR § 1001.19(d), which require an application's noise modeling to ignore any attenuation of sound that results from transient changes of weather and temperature and should assume stable atmospheric conditions. CCC states that the K4 meteorological correction employed by the Applicant assumes incompatible atmospheric conditions that reduced the results of the predicted noise by up to 4.5dB before any other adjustments were even made.

Finally, DPS Staff takes a minor exception with the Examiners' inclusion of sub-conditions 68(d)(ii)-(iv). DPS Staff suggests that to avoid unnecessary over-complication of the use of noise reduction operations sub-condition 68(d)(ii)

should be amended to read that "[s]ound levels may be evaluated at either 4.0 meters with no uncertainty added, or at 1.5 meters with a 2 dBA correction for uncertainty added." DPS states that this suggested approach provides flexibility for sound level evaluations consistent with the Siting Board's recent Rehearing Order in Canisteo Wind.

Discussion

We agree with DPS Staff and CCC that the Examiners captured the essence of their contentions in concluding that the selective application of K4 meteorological corrections to the ISO 9613-2 model created a hybrid model of questionable accuracy, as noted by the authors of the CADNAA modeling program. We support DPS Staff's recommendation that the Applicant be required to remodel the predicted annual noise levels by applying to the modeled results either the entire suite of CONCAWE corrections or by applying the Van den Berg corrections.

Additionally, we agree with the DPS Staff recommendation regarding the sub-conditions related to Certificate Condition 68 and modify the language accordingly.

2. Noise: Design Goals

CCC takes exception to the Examiners' failure to provide a certificate condition that would mandate ACWE to include a design goal of 40 dBA L(night-outside). CCC maintains that the lack of such a requirement makes the RD inconsistent with Cassadaga Wind, Baron Winds, and Number Three Wind. Instead, CCC contends that the RD recommends a 50 dBA L(night-outside) noise design goal that no party to this case recommended.

CCC notes that the Siting Board in Cassadaga Wind required the 40 dBA L(night-outside) goal to provide protection for local residents from unwanted noise. CCC notes that the 40

dBA (Lnight) goal ordered by the Board in previous cases incorporates a 10-dB nighttime penalty, and that the RD's noise design goals ignore the application of any adjustments for the distinctive characteristics of wind turbine noise as perceived during nighttime operations.

Discussion

Given the Examiners' recommendation of a regulatory limit of 45 dBA (Leq-8-hour) at non-participating residences, it is unclear what the source was for the Examiners' modeling goal of 50 dBA L(night-outside) as the annual continuous average for non-participants. No party opposed the CCC exception. We agree and have changed the certificate condition accordingly.

3. Noise: Regulatory Standards

DOH takes exception to the Examiners' recommendation of a 45 dBA (Leq-8-hour) regulatory limit for Project non-participants. DOH relies on the Siting Board's decision in Number Three Wind that the Siting Board left open the possibility of reducing its precedent of a 45 dBA (Leq-8-hour) regulatory limit for Project non-participants if new evidence provided a basis for a finding that such a lower limit was necessary to protect the public health. DOH contends that it did provide such evidence in the form of a comparison between the WHO 2018 conclusion about the noise level at which 10% of residents would be highly annoyed, and the findings of three studies that the WHO had not been able to consider. DOH argues that the findings of these studies considerably expanded the record and provide ample evidence for the Siting Board to adopt a lower regulatory noise limit. DOH also contests the Examiners' reliance on the distinction between direct and indirect health effects, noting that DOH considers annoyance as a health concern in and of itself, without identifying it as either a direct or indirect effect. DOH distinguishes the ACWE

record from the Siting Board's precedent by noting that the intervening release of WHO 2018 supersedes such precedent.

CCC also takes exception to the recommendations regarding regulatory limits regarding noise. In particular, CCC, relying on a statement in a DPS Environmental Impact Statement in the Public Service Commission's Clean Energy Standard case, excepts to the Examiners' discussion on annoyance as an issue relative to individuals rather than community as a whole. CCC posits that the RD, in contrast to general noise control standards, provides recommendations based on the assertion that noise annoyance is not an objectively predictable result of exposure to noise, but is caused instead by a subjective and therefore unreliable response to noise.

ACWE opposes the exceptions of both DOH and CCC. The Applicant states that DOH's claims that the studies DOH offers are new developments, and the claim that those studies demonstrate an association between sound levels and high annoyance are incorrect. To the Michaud 2016 study cited by DOH, ACWE notes that the study's conclusion was that the vast majority of people self-reporting that they were highly annoyed by wind turbines were highly annoyed for reasons other than noise.

As to DOH's reliance on the Hongisto 2017 study, ACWE notes that the study had a greater than 50% non-response rate calling into question whether bias exists in the study results, and, more importantly that the 44% highly annoyed conclusion is based on only 7 of 16 respondents at the modeled sound level, excluding the 57.5% that did not respond to the survey. In addition, the Applicant notes that the 44% number applies only to annoyance to outdoor noise, and that indoor noise annoyance reports were less than half that rate (3 of 15 respondents).

As to DOH's final study, the 2019 Haac study, ACWE points to the study's conclusion which the Examiners also discuss in the RD. Haac 2019 concludes that while wind turbine sound level is the strongest predictor of audibility, more experiential and psychological variables, such as visual perception, self-reported noise sensitivity, and prior attitude/move-in after, were the strongest predictors of noise annoyance. As the Examiners explained, the study's results are far from conclusive on the points raised and instead suggest that wind turbine noise annoyance is mostly an expression of personal experience and visual perceptions rather than an objective response to wind turbine sound level.

As for CCC, the Applicant observes that while the exception makes an effort to distinguish between individual annoyance and community annoyance, it never explains the significance of that alleged distinction and why it makes any difference to the RD's conclusions.

Discussion

We do not find the new studies offered to be of sufficient quality or convincing evidence that we are inclined to revisit our established precedent for the regulatory limit to be imposed in this matter. For all the reasons cited by the Examiners, we adopt their recommendations as to the regulatory limits to be applied.

4. Noise: Amplitude Modulation Penalty

DPS Staff excepts to the portion of the Certificate Conditions in the RD that fail to include a penalty for amplitude modulation. Specifically, DPS Staff asserts that the Examiners' failure to include an Amplitude Modulation Penalty is inconsistent with past Article 10 cases. DPS Staff maintains that because the Examiners recommended that the Siting Board adopt a short-term noise limit of 45 dBA Leq-8-hour for this

Project, that limit should be subject to Amplitude Modulation penalties consistent with the Orders in Cassadaga Wind, Baron Winds, Number Three Wind, Bluestone Wind, and Canisteo Wind.

ACWE opposes the DPS Staff exception based on its testimony amplitude modulation is not expected to be a significant issue given the area's terrain. Moreover, ACWE maintains that measuring amplitude modulation is a difficult and uncertain process not worth undertaking given the likelihood that it is not an issue.

Discussion

As we have accepted the Examiners' recommended 45 dBA Leq-8-hour standard, we agree with DPS Staff that a penalty for amplitude modulation conditions is appropriate. As DPS Staff states, an Amplitude Modulation Penalty is necessary to properly measure repetitive sounds occurring at a frequency of about one second or less, that are otherwise unaccounted for by a 45 dBA limit. Notwithstanding ACWE's position, under the Siting Board's previous Orders, amplitude modulation becomes an issue when there are excessive complaints about its effects. Thus, it is in the public interest for the issue to be addressed by measurement when those complaints occur. The Certificate Conditions have been modified for consistency with the Siting Board's precedent on this issue.

5. Noise: Post-construction Monitoring

ACWE also takes issue with the Examiners' recommendation that we adopt DPS Staff's post-construction noise monitoring protocol. The Applicant maintains that the Examiners did not consider what it contends are that protocol's short-comings such as the time involved in acquiring adequate noise samples and the requirement of the DPS Staff protocol to have manned sampling stations while those samples are being collected. ACWE also contends that the manned stations inject

unnecessary arbitrary inconsistency into the sample collecting process by requiring the operator to turn the equipment on and off to collect sound samples during ideal conditions. ACWE argues that allowing a computer algorithm to review hours of collected samples creates a methodical review that eliminates the risk of inadvertent manipulation by human operators.

ACWE points to a study of Wind Turbine Noise for the State of Massachusetts, Hearing Exhibit 363, to demonstrate the difficulties with using a method requiring wind turbine shut offs for obtaining comparable measure of background noise. ACWE notes that the Massachusetts study found that only 13% of monitored locations had discernable changes, defined as greater than a 3dB differential, in conditions between turbine-on and turbine-off conditions. The Applicant contends that DPS Staff's protocol can be expected to yield valid results less than 13% of the time given that the protocol requires sampling stations be located at a greater distance away than those used in the Massachusetts study.

ACWE claims that the Examiners' sole reasoning for recommending that the Siting Board adopt the DPS Staff protocol is because of their concerns with the pre-construction noise modeling. ACWE argues that there is no nexus between the two noise considerations, the conservatism of the modeling versus the merits of the monitoring protocol rendering the reason for the Examiners' recommendation illogical.

DPS Staff opposes ACWE's exceptions and maintains that the Applicant's protocol is insufficiently protective of the community and therefore not in the public interest. DPS Staff counters ACWE's suggestion that the Examiners' recommendation was contrary to Siting Board precedent by noting that the Siting Board has included the DPS Staff proposal as a certificate condition in its Eight Point Wind, Number Three Wind, Canisteo

Wind, and Bluestone Wind decisions. DPS Staff also maintains that the turbine shut off method was used by the Siting Board in the initial Article 10 certification for Cassadaga Wind and that the Siting Board has followed that precedent in every certificate it has issued for a wind facility since then.

CCC also opposes ACWE's exceptions to the Examiners' recommendation for the DPS Staff protocol. CCC maintains that the Applicant's proposal is arbitrary and departs from generally accepted noise monitoring standards. CCC argues that the need for the Applicant's post-collection processing protocol to match, in time, the sound meter measurements with the concurrent weather and turbine operations data and to identify those periods in which the combination of weather conditions and wind speed create conditions favorable to turbine noise being dominant is unnecessary and is inconsistent with generally accepted acoustic standards for measuring the pre-existing background sound levels in the project area.

CCC argues that the prolonged, unattended recording and the extensive post-recording processing required by ACWE's recommended post-construction monitoring are factors that make it less reliable than DPS Staff's protocol. CCC notes that conditions favorable to wind turbine noise are very common and do not require extensive post-processing such that a technician can measure wind turbine noise during wind shear conditions, when ground-level wind speeds are minimal and do not generate spurious noise that interfere with the sound measurement. Thus, maintains CCC, the need to shut down turbines to obtain accurate pre-existing background sound tests is minimal under the DPS Staff protocol. CCC also states without elaboration that it excepts to the Examiner's failure to prescribe the applicable ANSI/ASA method to measure pre-existing background sound levels for purposes of compliance testing.

DPS Staff takes exception to the Examiners' apparent restriction of the monitoring to take place during Spring and Fall, as opposed to "leaf-on" and "leaf-off" times of year. DPS Staff claims that the former is restricted in scope to six months of the year, while the latter encompasses the entire year but is based on a particular environmental condition that can be readily assessable.

Discussion

We agree with the Examiners' recommendation to adopt the DPS Staff protocol. Having conducted the evidentiary hearing, the Examiners were in the best position to judge credibility. Based on the DPS Staff and CCC opposition, we agree with the Examiners that the difficulties cited by ACWE with the DPS Staff protocol are overstated. The goal of post-construction monitoring is to obtain an accurate measure of the noise produced by the turbines when that noise is audible. We find that the DPS Staff protocol can produce those results without the need for extensive post-collection computer processing which would require an extensive compliance review of its own and may lead to the need for compliance personnel to listen to extensive hours of raw recordings or to review extensive data sets.

As for the Examiners' recommendation that monitoring take pace only during Spring and Fall instead of leaf-on and leaf-off conditions, it is not clear that the Examiners intended to depart from the DPS Staff recommendation in the sense that Spring was not meant to imply leaf-on and Fall to imply leaf-off. However, we agree with DPS Staff that the terms Spring and Fall have a specific, limited definition that unnecessarily restricts when those samples should be collected and that may not allow for the conditions that DPS Staff intends for the protocol to capture, full-foliage versus no-foliage, or as DPS

Staff specifies, “leaf-on” and “leaf-off.” We grant the exception DPS Staff raises on this point.

6. Seismic Risks

CCC takes exception to the RD in total inasmuch as it does not discuss or make any recommendations based on CCC’s evidence regarding the risk to the area for a potential increase in seismic activity. CCC argues that ACWE has not provided the Siting Board with the information necessary to find that seismic impacts have been avoided and minimized. CCC contends that the United States Federal Emergency Management Agency (FEMA) requires a full profile of earthquake hazard before a local hazard mitigation plan may be approved for any jurisdiction with a Peak Ground Acceleration (PGA)[157] of 3% or greater, and that ACWE neglected to consult detailed fault maps of the area that indicate the Project lies in a zone of a PGA of approximately 8%g.

CCC notes that during the case DPS Staff supported CCC’s recommendation that the Applicant provide design specifications that demonstrate that the pad and windmill can withstand the largest credible earthquake and ground motion in the region. CCC contends that ACWE has declined to analyze research suggesting that the Southern Tier area where the Project will be located lies on the Clarendon-Linden fault system, which is currently active, relying instead on evidence of historical earthquake events. CCC states that DPS Staff supported the inclusion of a certificate condition that would require ACWE retain a qualified geotechnical engineer prior to construction to perform an analysis of the potential seismic risk and to make recommendations for final foundation designs

[157] On its website, FEMA explains that PGA is a way of measuring earthquake risk and refers to the speed at which the ground moves during a seismic event.

that appropriately mitigate any such risks, together with additional requirements for the final report concerning recommendations made specifically by CCC's expert witness, Dr. Jacobi.

CCC also contends that the record lacks evidence to support any conclusion that the Project's turbines can withstand the largest potential earthquake in the area. CCC observes that based on its record information, the area is subject to bedrock or "basement" earthquakes that can result in significantly higher peak ground acceleration than 8%g.

Finally, CCC contends that the Siting Board should not grant a certificate to ACWE until it can demonstrate that the Project has minimized the risk from seismic events. CCC contends that, to make such a demonstration, ACWE must provide the FEMA-required documentation: a map of the Clarendon-Linden fault system and other active fault systems in the area that also shows planned wind turbine sites; a determination of the maximum credible earthquake that may occur along the faults; an evaluation of published research concerning the area's faults and their seismicity; and a determination that the wind turbines can withstand the PGA derived from the maximum credible earthquake taking into consideration that the 1929 Attica earthquake occurred about 17 miles from the northern boundary of the Project site and that the Clarendon-Linden fault system underneath the Project area is presently active.

DPS Staff opposes the CCC exceptions to the extent that CCC argues that the record is insufficient for the Siting Board to make the required findings to issue a certificate. However, DPS Staff notes that it supports a Siting Board finding that additional seismic risk analyses should be required as part of a compliance filing prior to construction. DPS Staff notes

that the Applicant's seismic analysis can be included in ACWE's pre-construction Final Geotechnical Report.

ACWE opposes CCC's exceptions and states that the RD's silence on the issue of seismic risk is evidence that the Examiners agreed with the Applicant that it made a sufficient and complete demonstration under Section 1001.21 of the Siting Board's regulations that no seismic risk in the Project area exists. The Applicant argues that the above-listed items CCC contends are missing from the record were either addressed in the Application or by ACWE's witness Joel Bahma during the evidentiary hearings, or that they are not required for the Siting Board to make the determinations required by Article 10.

Discussion

It is unclear from the RD whether the absence of a discussion on seismic issues was an oversight or intended to reflect a finding that the issues raised by CCC and DPS Staff were not relevant in the Examiners' opinion. Thus, we are examining the issue without any recommendations. Having examined the record and the positions taken in exceptions, we agree with DPS Staff that although this information is important to authorizing construction, it is not a bar to issuing a certificate. Consistent with DPS Staff's recommendations, we find that ACWE's pre-construction geotechnical report, required as part of the Foundation Design Package required per Attachment A to the Certificate Conditions proposed in the RD, include an analysis of the potential seismic risk and recommendations from a qualified geotechnical engineer for final foundation designs that adequately mitigate any seismic risks found in the report to exist. The ACWE report should include either the analyses recommended by CCC's expert Dr. Jacobi or an explanation as to why his recommendations are not feasible or otherwise warranted. Additionally, ACWE should, in its report, consult the American

Society of Civil Engineers/American Wind Energy Association RP2011 Recommended Practice for Compliance of Large Land-based Wind Turbine Support Structures (ASCE/AWEA RP2011) and its recommendations regarding load combinations that consider the combination of wind and seismic loading unique to wind turbines. Finally, ACWE should report its analysis of the seismic design practices of the ASCE/AWEA RP2011 in combination with the New York State Building Code, IEC 61400-1, ASCE 7, and any other applicable criteria referenced in the ASCE/AWEA RP2011.

D. Compliance with State and Local Laws and Regulations – PSL § 168(3)(e)

PSL § 168(3)(e) requires the Siting Board to make a finding that the Facility is designed to operate in compliance with all applicable State and local laws and regulations concerning the environment, public health and safety, all of which are binding on ACWE.[158] With certain exceptions, State and local procedural requirements are preempted, including any local approval, consent, permit, certificate, or other condition for construction and operation of a facility.[159]

The statute also allows the Siting Board to elect not to apply, in whole or in part, any substantive local environmental or public health and safety requirement on a finding that, as applied to the proposed facility, the requirement is "unreasonably burdensome" in view of the technology or the needs of, or costs to, ratepayers whether located inside or outside of the municipality in which the facility is located.[160] An applicant may seek a waiver of a local substantive requirement and has the burden of justifying

[158] PSL § 163(3)(e).

[159] See PSL § 172(1); 16 NYCRR § 1001.31(a).

[160] Id.

its request by showing "the degree of burden caused by the requirement, why the burden should not reasonably be borne by the Applicant, that the request cannot reasonably be obviated by design changes to the proposed facility, the request is the minimum necessary, and the adverse impacts in granting the request are mitigated to the maximum extent practicable."[161] Thus, we may elect not to apply, in whole or in part, any otherwise applicable local requirement if we find that it is unreasonably burdensome.[162]

1. State laws and procedural local law delegations

In their Recommended Decision, the Examiners analyzed the Project's compliance with State and local procedural and substantive laws. They recommended that, subject to the proposed Certificate Conditions, we find the construction and operation of the Facility to be in compliance with applicable State laws.[163] The Examiners also recommended approval of several limited delegation requests pursuant to local laws on matters that are outside of the Siting Board's general purview and that have been delegated in prior Siting Board cases.[164] No party took exception to these recommendations, and we adopt the Examiners' recommendations on these matters.

The Examiners also recommended approval of ACWE's proposed waiver of one Town of Arcade local law.[165] No party has taken exception to this recommendation. The Examiners further requested ACWE to clarify an inconsistency in the record as to whether ACWE was requesting a waiver of two other Town of Arcade

[161] 16 NYCRR § 1001.31(e).

[162] PSL § 163(3)(e).

[163] Recommended Decision, pp. 141-142.

[164] Recommended Decision, pp. 142-143.

[165] Recommended Decision, pp. 143-144.

laws.[166] ACWE clarified that it is not requesting a waiver of those laws.[167] We adopt the Examiners' recommendations on these matters.

2. Town of Farmersville 2019 local law

The Examiners recommended that we apply Farmersville Local Law #3 of 2019, which was the law in effect on December 5, 2019, the date the record closed in this proceeding, and that we find the Project, as constructed, would be in compliance with this law. The Towns of Freedom and Farmersville except to this recommendation on two grounds: first, that the 2019 law should be construed to include every Amish residence as being included within the law's category of "any school, church, hospital or nursing facility," thus requiring a much longer setback from turbines than would be required by the 2019 law for other residences; and second, that the 2019 law was replaced by a new comprehensive wind farm law enacted by the Town in 2020. The second exception is addressed in the subsection below on post-hearing local resolutions and laws.

We find unpersuasive the Towns' argument[168] that every Amish residence should be treated as a church.[169] This issue was fully litigated, briefed and addressed in the Recommended Decision,[170] and we agree with the Examiners that it is unreasonable to construe the term "church" as defined in Farmersville's local law to include every Amish residence in the town. We agree with the Examiners' finding that each Amish

166 Recommended Decision, pp. 144-145.

167 ACWE Brief on Exceptions, pp. 39-40.

168 We note that this argument was made by the Towns, not by representatives of the Amish community.

169 Towns of Freedom and Farmersville Brief on Exceptions, pp. 17-18.

170 Recommended Decision, pp. 145-147.

residence is used for worship services in rotation among the households of the community, or approximately once every 10 months.[171] It is unreasonable to interpret the term "church" to include what is in essence a full-time residence.[172]

Finally, the Towns argue that the Siting Board has no authority to overrule Farmersville's interpretation of its own law.[173] However, the record reflects that Farmersville's interpretation of the term "church" as applied to each Amish residence was a litigation position with no historical application prior to this case. In any event, in this case as an Article 10 proceeding, the ultimate responsibility of interpreting Farmersville's local law lies with the Siting Board and we interpret the plain language of the term "church" to be inapplicable to residences in the Amish community.[174]

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[171] The Towns claim that the once-in-10 months figure is "based on speculation." Towns of Freedom and Farmersville Brief on Exceptions, p. 18. To the contrary, it is based on simple mathematics. As noted at page 146 of the Recommended Decision, the record establishes that there are approximately 22 households in the Farmersville Amish community and that the community holds worship services in these households on a rotating basis, once every two weeks. Each household is therefore responsible for services once every 44 weeks, which is slightly longer than once every 10 months.

[172] In the same manner, we would not call an individual's residence a "church" under the local law definition simply because they held a prayer meeting or religious study group in that residence on some periodic basis.

[173] Towns of Freedom and Farmersville Brief on Exception, p. 18.

[174] See ACWE Brief Opposing Exceptions, pp. 12-13, citing Matter of Town of New Castle v. Kaufman, 72 NY2d 684, 687 (1988); Matter of Exxon Corp. v. Board of Stds. & Appeals of City of N.Y., 128 AD2d 289, 296 (1987); Matter of Mandel v. Nusbaum, 138 AD2d 597, 598 (1988); Matter of Frishman v. Schmidt, 61 NY2d 823, 825 (1984); Taylor v. Foley 122 AD2d 205, 207 (1986).

3. Town of Freedom 2007 and 2019 local laws

The Examiners recommended application of the Town of Freedom's 2007 local law, which the Examiners found was the law in effect as of the December 5, 2019 close of the record in this proceeding. ACWE excepts, taking the position that the 2019 law was the law in effect at the time of the hearings in this case. For the following reasons, we grant ACWE's exception and apply the 2019 law.

The situation is complicated. The 2007 local law was replaced first by a 2018 law and then by a 2019 local law that was essentially a duplicate of the 2018 local law. In a subsequent lawsuit filed in Freedom United v. Town of Freedom Town Board, Index No. 87572 (Sup. Ct. Cattaraugus Co. Oct. 25, 2019), the court vacated the Town of Freedom's 2018 law.[175] The decision in Freedom United included language indicating that the 2007 law remained in effect.[176] Notably, the court's decision related to procedural infirmities underlying the 2018 law, not the identical 2019 law.

The 2019 law is also subject to a legal challenge. Based on documentation provided by the Towns,[177] it appears that residents of the Town of Freedom are challenging the 2019 law on procedural grounds and a hearing was scheduled for May 21, 2020, to determine whether ACWE will be permitted to intervene in the lawsuit.

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[175] See Slip Op., included in the record of this proceeding as Hearing Exhibit 340. Subsequently an appeal from this decision was dismissed in Freedom United v. Town of Freedom Town Board, -- AD3d --, 2020 NY Slip Op 61184(U) (4th Dep't 2020).

[176] Hearing Exhibit 340, p. 8.

[177] Towns of Freedom and Farmersville Brief Opposing Exceptions, Exhibits A, B and C.

ACWE has maintained throughout this proceeding that the 2019 law is applicable to the Project because that was the relevant law in existence at the time the record closed. The 2019 law was duly enacted and filed with the Secretary of State,[178] and although judicially challenged, has not to this date been invalidated by the courts.

On review of the record, we grant ACWE's exception. Pursuant to PSL § 168(1), we must decide this case based on the record. The record shows that the 2019 law was in effect up until the time the record closed, and that this law has not been vacated by any court.

Because we apply the Town of Freedom's 2019 law, we need not consider the arguments of the parties as to whether the provisions of the 2007 law, which the 2019 law superseded, were unreasonably burdensome.

4. Post-hearing local resolutions and laws

The Towns of Freedom and Farmersville both passed a series of resolutions related to wind farms on January 6, 2020, a month after the close of the record in this case. The Town of Farmersville followed up with a new local law, enacted on February 10, 2020, two months after the close of the record and ten days after the filing of reply briefs in this proceeding.[179]

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[178] Hearing Exhibit 270 includes a copy of the 2019 law as enacted and filed.

[179] The Town of Farmersville enacted another local law, Local Law 4, on April 13, 2020, superseding the local law enacted in February 2020 and also containing substantive provisions applicable to wind energy facilities. On May 20, 2020, the Town of Farmersville filed a motion requesting the Examiners to take official notice of this law and to apply its provisions to the Project. On May 21, 2020, ACWE responded to the Farmersville motion. For the same reasons stated herein with respect to the local law enacted in February 2020, we also decline to apply Local Law 4.

The Examiners, relying on the Siting Board's Bluestone Wind decision, recommended that the Siting Board decline to apply these resolutions and local laws because they were passed too late to be considered in this proceeding.[180]

In their exceptions the Towns of Freedom and Farmersville assert that the Farmersville February 10, 2020 law cannot be waived because ACWE did not seek a waiver.[181] Logically, this argument means that if a new piece of local legislation is enacted too late in a proceeding to raise and litigate objections, the Siting Board has no choice but to apply the new legislation. This position is untenable and is rejected as illogical and contrary to the policy of Article 10. To hold otherwise would allow a party to substitute itself for the Siting Board in making the complex balance of competing interests that must be made in generation siting cases. We recognize the importance of local legislation in the siting process. However, we must decide this case on the record and within the statutory timeframe, and the final decision on what local laws to apply must be made by the Siting Board.

Secondly, the Towns argue that the Siting Board's decision not to apply new local legislation can only be based upon a robust and specific evidentiary showing of specific facts and analysis.[182] The Towns complain that they have not been given the opportunity to litigate the evidentiary basis for an override. We recognize this concern, but in this case the legislation in question was enacted too late to make such an evidentiary record, including testimony, hearings, briefs, reply

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[180] Recommended Decision, pp. 150-158, citing Bluestone Wind Order, pp. 80-81.

[181] Towns of Freedom and Farmersville Brief on Exceptions, p. 14.

[182] Towns of Freedom and Farmersville Brief on Exceptions, pp. 14-15.

briefs, a Recommended Decision, briefs on exception and briefs opposing exceptions, in time to meet the statutory deadline of a decision in Article 10. The Towns also argue that the Siting Board must apply whatever legislation is in force at the time of the Siting Board's decision.[183] The result of such a rule would make the Towns, not the Siting Board, the final arbiters of the conditions for renewable generation siting. When it is too late to develop a full evidentiary record on new local legislation, we must decide the case based on the record in front of us. To do otherwise would be unfair to the other parties to the proceeding and would frustrate the clear policy of Article 10 that it is the Siting Board, not the Towns, that makes the final decision on what local laws will be applied to a project.

Third, the Towns argue on exceptions that "the policy of Article 10" is not a valid basis for an override.[184] This argument misapprehends the basis of the Recommended Decision. The basis of the Recommended Decision is that the timing of the legislation has made it impossible for the parties and the Siting Board to evaluate the new legislation with a full and robust record. That impossibility makes the new legislation unreasonably burdensome.

Fourth, the Towns argue that the problem could be cured by extending the period for the Siting Board's decision for up to 6 months pursuant to PSL § 165(4)(a) based on "extraordinary circumstances."[185] We agree with the conclusion in the Recommended Decision that this is not a viable solution. Such an extension could be extremely damaging to an applicant,

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183 Towns of Freedom and Farmersville Brief on Exceptions, p. 17.

184 Towns of Freedom and Farmersville Brief on Exceptions, pp. 15-17.

185 Towns of Freedom and Farmersville Brief Opposing Exceptions, p. 9.

and nothing would prevent a town board adamantly opposed to a project from passing additional restrictive legislation even later in the extended process, leaving the Siting Board with the same predicament but without a statutory basis for a further extension.[186]

We also decline to apply the January 2020 resolutions adopted by the Towns. As set forth in the Recommended Decision, these resolutions do not have the force of laws.[187]

Accordingly, we adopt the Examiners' recommendation that we decline to apply the post-hearing resolutions and laws adopted by the Towns of Freedom and Farmersville. We determine that Local Law #1 of 2020 is unreasonably burdensome pursuant to PSL § 168(3)(e). In addition, as we decided in the Bluestone Wind Order, PSL § 168(1) provides that the Board "shall make the final decision on an application for a certificate . . . upon the record before the presiding officer."[188] As in Bluestone, the legislation in question here was enacted too late for full consideration on the record. The statute does not allow us to go beyond the record in this proceeding.

E. Electric Generation Capacity - PSL § 168(3)(a)

PSL § 168(3)(a) and PSL § 168(4) require a finding that the Facility will be a beneficial addition to the electric generation capacity of the State, taking into consideration whether the proposals are consistent with the State's energy policy and planning objectives. Based on the record, the Examiners found that the Facility will be a beneficial addition to the electric generation capacity of the State and is

186 Recommended Decision, p. 155.

187 Recommended Decision, pp. 153-154.

188 Bluestone Wind Order, pp. 80-81.

consistent with the State's energy policy and planning objectives. The latest State Energy Plan (SEP), issued in 2015, and the Clean Energy Standard (CES), adopted by the Commission in Case 15-E-0302, emphasize the importance of renewable electric generation, which will be provided by the Facility. The Facility will serve the goals of increasing and improving fuel diversity by adding more wind generated power into the mix. The Examiners recommended that we determine that the Project is a beneficial addition to New York's electric generation capacity through the provision of renewable energy to the regional market, the diversification of New York's generation mix, and the reduction of greenhouse gas emissions.

CCC states that it is "concerned that the project will not advance the State's renewable energy goals, and will have no effect on climate change."[189] CCC argues that because of transmission constraints between upstate and downstate, new upstate renewable generation may result only in the curtailment of existing renewable generation, displacing an equivalent amount of wind generated electricity rather than diluting or reducing the equivalent amount of fossil fuel generated power. CCC calls for a much more detailed analysis of transmission constraints and the impact of the Project beyond its first year of operations. CCC further argues that the Recommended Decision's statement that transmission constraint problems will be resolved in the future[190] is unsupported.

ACWE responds that while CCC's description of transmission constraints is accurate, such constraints are not a basis to deny permits to proposed renewable energy projects. ACWE argues that CCC's position is an attack on the wisdom of

[189] CCC Brief on Exceptions, p. 29.

[190] Recommended Decision, p. 34.

the State's policy to increase the State's supply of renewable generation, a policy choice not under review in this proceeding.[191]

We agree with CCC and ACWE that the record establishes that there are transmission constraints between upstate and downstate. We also agree that these constraints will need to be resolved at some time in the future if the State is to receive the full benefits of renewable energy projects that are sited upstate. We do not agree with CCC that these constraints must be addressed before we approve any further upstate renewable energy projects.

Requiring the resolution of future Statewide transmission issues before individual projects can be sited and approved would be putting the cart before the horse. Transmission cannot economically be planned or built without an understanding of what amount of energy must be transmitted, and from and to where it must be directed. Pausing the siting process until future transmission issues are solved would only serve to unduly and unreasonably delay the achievement of the State's clean energy goals. Moreover, it could result in proposed transmission projects that do not adequately serve those later proposed generation projects. This situation could create sunk costs for unnecessary or redundant transmission facilities while also resulting on the need for even more transmission projects.

Each new renewable energy project is fully evaluated by the NYISO, including its impact on the transmission network, and the results of its evaluation (a "System Reliability Impact Study") in this case are included in the Article 10 record. The record in this case establishes that the Project, when operated

[191] ACWE Brief Opposing Exceptions, pp. 17-18.

appropriately, will not have a negative impact on the State's energy grid.[192] CCC's witness did not challenge this finding, except to argue that the modeling should be carried out over a longer forecasted period. CCC's witness agreed that the impact of a single wind project is small and can be treated "only as a load perturbation," but he argued that intermittent generation facilities as a whole need to be modeled because "together they represent a huge problem."[193] We disagree. Requiring the modeling of future intermittent generation facilities as a whole over a long period of time in each siting case would be a recipe for paralysis by analysis. We are not convinced that such an analysis, which would certainly be very time-consuming and expensive, would produce anything other than speculative results. We are satisfied that the record in this proceeding supports the required statutory finding.

Finally, CCC is not correct that that there is no basis in the record for the Recommended Decision's optimism that the transmission issues between upstate and downstate can and will be resolved. ACWE's witness Robert Cleveland addressed the dynamic and evolving nature of the transmission system and the NYISO's processes for addressing transmission needs and proposals for meeting them.[194] We also note the recently enacted Accelerated Renewable Energy Growth and Community Protection Act, which includes measures to expedite transmission upgrades.

In conclusion, we find that the proposed Facility is a beneficial addition to the electric generation capacity of the State.

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[192] Hearing Exhibit 32, Application Exhibit 5.

[193] Kreutz Surrebuttal Testimony, pp. 10-11.

[194] Tr. 73E-73G.

F. Miscellaneous Issues

1. Decommissioning

ACWE takes exception to two aspects of the Examiners' recommendations concerning decommissioning. First, the Applicant objects to the Examiners' recommendation that salvage value be excluded from the amount of surety to be provided to cover the costs of decommissioning. Second, ACWE objects the Examiners' recommendation that the decommissioning costs be secured by a letter of credit to be held by the towns in which the Project is to be constructed.

To the first point, ACWE relies on the fact that the turbines will contain substantial amounts of steel that can be valued by consulting the scrap metal markets. The Applicant contends that ignoring this value makes the development of utility scale wind projects unnecessarily more costly jeopardizing the development of renewable energy resources. As to the form of surety, ACWE relies on its own experience to contend that a surety bond provides adequate financial security to the municipalities. ACWE submits that DPS Staff has provided no testimony from an industry-experienced analyst to support its position that surety bonds are inadequate. ACWE concludes by stating that the RD did not provide an adequate basis for the Siting Board to adopt its recommendation.

DPS Staff takes exception to the Examiners' recommendation that turbine installations be removed only to a depth of three feet, compared to its litigated position that they be removed to a depth of four feet. DPS Staff claims that the Examiners were too restrictive in their understanding of DPS Staff's position by addressing their recommendations to root systems or agricultural equipment. Instead, DPS Staff notes that its position regarding a depth of four feet is not associated with interference of planting or preparation of

planting, but instead is designed to eliminate interference of abandoned components with any future agricultural conservation best management practice installations, such as drainage tiles, diversion terraces, swales, or the like. DPS Staff notes that, while this term of decommissioning was not addressed by the Siting Board in Cassadaga Wind, it was included in the Cassadaga Wind decommissioning compliance plan approved by the Public Service Commission.[195]

DAM also took exception to the three-foot depth recommended by the Examiners. DAM argues that its Guidelines do state that construction must take place at a depth of four feet below surface for all buried electric cables in cropland. DAM maintains that it necessarily follows that the four-foot rule therefore applies to removal as well, despite the absence of any specific requirement in its April 2019 revision of its Guidelines for Agricultural Mitigation for Wind Power Projects because those Guidelines state that all construction related debris and project components should be removed from the site on decommissioning. No party opposed the DPS Staff and DAM exceptions.

Discussion

On review of the RD, the Examiners based their analysis on the precedent set in the Siting Board's Cassadaga Wind Order. Inasmuch as ACWE suggests that the reliance on precedent alone is insufficient analysis, the Examiners incorporated the reasoning of the Siting Board in Cassadaga Wind by their reference to the Order.

As the Siting Board stated in Cassadaga Wind, the best method for addressing the primary risks posed by a potential

[195] Case 14-F-0490, Cassadaga Wind – Article 10 Wind Generation Siting, Order Approving Compliance Filing (issued July 12, 2019).

abandonment of the Project is to not include any offsets for salvage or resale value of the component parts or materials in the decommissioning security estimate. The process of dismantling Project component parts and restoring the site is a significant and complicated undertaking, and it is crucial that sufficient funds be available at the outset for the work to proceed in a timely and efficacious manner. Such a situation, should it develop, can be assured by having the full decommissioning cost available, with no offset for salvage value. In particular, salvage value and scrap costs can fluctuate dramatically, and we do not regard that risk to be an appropriate one for the Towns to assume. As we do not require any separate contingency factor added to the decommissioning security, omitting any offset for salvage value is an appropriate method of reducing the risk inherent in decommissioning should the Project be abandoned.

As for the Siting Board's established preference for a letter of credit, a position from which it has not deviated, we also turn to the Cassadaga Wind Order. The Siting Board's reasoning there is adequate justification for adopting the Examiner's recommendations. Wind power projects are long-term facilities that have heightened risks should they fall into disrepair. Accordingly, given the long-term nature of the need for available funding, spanning the entire life of the Project, the certainty to the Towns provided by a letter of credit that such funds will be readily available regardless of the solvency of the Certificate Holder is sufficient reason to require the use of such a letter instead of a surety bond.

Turning to the exception taken by DPS Staff and DAM regarding the depth of restoration, the Examiners are correct that there is no specific recommendation that removal of Project components take place to a specific depth in the DAM Guidelines.

However, we are persuaded by DAM that the specified intent of those Guidelines is require the removal of all Project components. When that intent is applied to the specified requirement that Project components be buried to a depth of 48 inches (4 feet), then the logical corollary is that the depth of buried components that should be removed is also four feet. Accordingly, we grant the DAM and DPS Staff exception.

2. National Grid Certificate Conditions

As noted in the RD, National Grid, the owner and operator of the transmission facilities to which the Project will connect to the New York State power grid, provided proposed certificate conditions in lieu of testimony. The Examiners recommended the adoption of those conditions to which no party objected to the extent that they were not duplicates of other conditions.

ACWE took exception to the inclusion of those conditions claiming that the record does not support their acceptance. The Applicant notes that the conditions were submitted a week prior to the evidentiary hearings and two months after direct testimony was due and that they were filed without any supporting testimony from National Grid. ACWE contends that they were improperly admitted into the record as National Grid had made no motion seeking leave to make its late filing. ACWE contends that it had no opportunity to respond or to engage in discovery or cross-examination. ACWE maintains that this action deprived them of their procedural rights under the State Administrative Procedure Act.

The Applicant notes that even if the record properly includes the proposed conditions, they relate to matters governed by the New York Independent System Operator’s Open Access Transmission Tariff, which is regulated by the Federal Energy Regulatory Commission under the Federal Power Act. The

Applicant maintains that including those conditions to which it has not already agreed to, namely recommended Conditions 28 through 30, can create conflicting mandates and obligations.

Discussion

No party, including National Grid and DPS Staff, opposed ACWE's exceptions to the inclusion of the proposed conditions. Given the unopposed contention that including those conditions in the Siting Board's order could lead to conflicting mandates and obligations, we agree with ACWE and, with the exception of those conditions it identified as having agreed to, we grant the Applicant's exceptions and decline to include those conditions here.

V. CONCLUSION

Based on the record before us, the exceptions to the Recommended Decision, the arguments of the parties, and all applicable laws and policies, we grant the Certificate of Environmental Compatibility and Public Need to Atlantic Wind subject to the Certificate Conditions, as modified, attached to this Order as Appendix A.

The Board on Electric Generation Siting and the Environment orders:

1. The Recommended Decision of Examiners Dakin D. Lecakes, Gregg C. Sayre, and Michael S. Caruso, to the extent consistent with this opinion and order, is adopted and, together with this opinion and order, constitutes the decision of this Siting Board in this proceeding.

2. Except as here granted, all exceptions to the Examiners' recommended decision are overruled.

3. Subject to the conditions set forth in this order and appended to it, a Certificate of Environmental Compatibility and Public Need is granted, pursuant to Article 10 of the Public

Service Law, to Alle-Catt Wind Energy LLC (the Applicant) for the construction and operation of a wind facility with a capacity of 340-megawatts, consisting of up to and associated Facility components to be located in Allegany, Cattaraugus, and Wyoming Counties, New York, in the Towns of Arcade, Centerville, Farmersville, Freedom, and Rushford and interconnecting with National Grid's transmission facilities for delivery into the New York State electrical grid, provided that the Applicant files a written acceptance of the Certificate pursuant to 16 NYCRR § 1000.15(a) within 30 days after the date of issuance of this opinion and order or within 30 days after the issuance of the Siting Board's final decision upon a petition for a rehearing, if any.

4. Upon acceptance of the Certificate granted in this opinion and order or at any time thereafter, the Applicant shall serve copies of its compliance filings in accordance with the requirements set forth in 16 NYCRR § 1002.2(c) and applicable Certificate Conditions. Pursuant to 16 NYCRR § 1002.2(d), interested persons and parties may file comments on any compliance filing within 21 days after its service date.

5. Prior to the commencement of construction, the Certificate Holder shall comply with those requirements of Public Service Law § 68 that do not relate to the construction and operation of the Facility by obtaining Public Service Commission permission and approval as an electric corporation.

6. If the Certificate Holder decides not to commence construction of the Project or any portion of the Project, it shall so notify the Secretary in writing within 30 days after making such decision and shall serve a copy of such notice upon all parties and all entities entitled to service of the application or notice of the application.

7. In the Secretary's sole discretion, the deadlines set forth in this order may be extended. Any request for an extension must be in writing, include a justification for the extension, and be filed at least three days prior to the affected deadline.

8. This proceeding is continued.

By the New York State Board
on Electric Generation Siting
and the Environment,

(SIGNED) MICHELLE L. PHILLIPS
Secretary

APPENDIX A

CERTIFICATE CONDITIONS

Case 17-F-0282 Alle-Catt Wind Project

Certificate Conditions

I. Project Authorization

1. Subject to the Conditions set forth herein and Attachment A, hereto, the Certificate Holder is authorized to construct and operate the Facility (Facility or the Project), as described in the Application by Alle-Catt Wind Energy LLC for a Certificate of Environmental Compatibility and Public Need Pursuant to Article 10 of the New York State Public Service Law (PSL) (the Application) and clarified by the Certificate Holder's supplemental filings, updates and replies to discovery data requests, additional exhibits, except as waived, modified or supplemented by the New York State Board on Electric Generation Siting and the Environment's (Siting Board's) Order Granting Certificate or other permits.

2. Pursuant to Title 16 of the New York Codes, Rules and Regulations (NYCRR) §1000.15, the Certificate Holder shall, within 30 days after the issuance of the Certificate, file with the Siting Board either a petition for rehearing or a verified statement that it accepts and will comply with the Certificate for the Project. Failure of the Certificate Holder to comply with this condition shall invalidate the Certificate.

3. The Siting Board expressly authorizes (a) the Public Service Commission (Commission) to require approvals, consents, permits, certificates or other conditions for the construction or operation of the Facility under PSL §§68, 69 & 70, with the understanding that the Commission will not duplicate any issue already addressed by the Siting Board and will instead only act on its police power functions related to the entity as described in the body of this Article 10 certificate; and (b) the New York State Department of Transportation (NYSDOT) to administer permits associated with Oversize/Overweight Vehicles and deliveries; Highway Work Permits; and associated Use and Occupancy approvals as needed to construct and operate the proposed facilities.

4. If the Certificate Holder believes that any action taken, or determination made, by a State or local agency or their respective staffs, in furtherance of such agency's review of any applicable regulatory permits or approvals, or actions or the lack thereof by a utility subject to the Public Service Commission's jurisdiction, is unreasonable or unreasonably delayed, conditioned or withheld, the Certificate Holder may petition the Siting Board or the Commission, as the case may be, upon reasonable notice to that agency or utility, to seek a determination of any such unreasonable or unreasonably delayed, conditioned or withheld, action or determination. The permitting agency, agency staff or utility, as the case may be, may respond to the petition, within ten days, to address the reasonableness of its action or determination.

5. Facility construction is authorized for up to 116 wind turbines, at locations in the Town of Arcade, Wyoming County, the Towns of Centerville and Rushford, Allegany County, and the Towns of Farmersville and Freedom Cattaraugus County, temporary or permanent access roads (a portion of one access road will be constructed in the Town of Machias, Cattaraugus County), 34.5 kilovolt (kV) electric collection system, collection substation, three permanent meteorological towers, one operations and maintenance (O&M) building, temporary facilities for a concrete batch plant and a construction laydown area, as indicated in Facilities Location maps. The total generating capacity of the Facility shall not exceed 340 megawatts (MWs).

6. If the Certificate Holder decides not to commence construction of any portion of the Project (not including turbine deletions as a result of final facility design as long as turbine deletions do not result in substantial re-routing of proposed Facility components including access roads, interconnection and

collection lines), it shall so notify the Secretary to the Siting Board (Secretary) in writing within 30 days of making such decision and shall serve a copy of such notice upon all parties in the same manner and at the same time as it files with the Secretary.

7. Reserved.

8. The Certificate Holder has acknowledged that it does not have the power of eminent domain to acquire real property easements or other permanent or temporary property rights and has asserted that the feasibility of the Project does not rely in any way upon the Certificate Holder or any other entity having the power of eminent domain or exercising the power of eminent domain to acquire permanent or temporary real property rights of any kind for the Facility or for any of the access roads, construction staging areas or interconnections necessary to construct or service the Facility. By granting this Certificate to the Certificate Holder, an entity in the nature of a merchant generator and not in the nature of a fully regulated public utility company with an obligation to serve customers, the Siting Board is not making a finding of public need for any particular parcel of land such that a condemnor would be entitled to an exemption from the provisions of Article 2 of the New York State Eminent Domain Procedure Law ("EDPL") pursuant to Section 206 of the EDPL. As a condition of this Certificate, the Certificate Holder shall not commence any proceedings or cause any other entity having the power of eminent domain to commence any proceedings under the EDPL to acquire permanent or temporary real property rights for the Facility or for any of the access roads, construction staging areas or interconnections necessary to construct or service the Facility without an express amendment to this Certificate, granted by the Siting Board after notice to the public and hearing, authorizing such proceedings.

9. This Certificate will automatically expire in five years from the date of issuance of this Certificate (the "Expiration Date") unless the Certificate Holder has completed construction and commenced commercial operation of the Facility prior to said Expiration Date.

10. The Secretary to the Siting Board, or Secretary to the Commission after the Siting Board's jurisdiction has ceased, may extend any deadlines established by this order for good cause shown. Any request for an extension must be in writing, include a justification for the extension, and be filed at least one day prior to the affected deadline.

II. General Conditions

11. The Certificate Holder shall file notice of receipt of the federal, state, and local permit(s) with the Secretary to the Siting Board (Secretary) as required by Attachment A. Should any permits be denied, the Certificate Holder shall file with the Secretary documentation demonstrating the reasons for the denial and how it plans to proceed with its Project plans in light of the denial.

12. The Certificate Holder shall file a request/application for a Water Quality Certification with the Secretary, prior to the commencement of construction of the Facility. This request shall be filed, served and noticed pursuant to 16 NYCRR §1000.8(a)(8) and shall be filed concurrently with the permit application filed with the United States Army Corps of Engineers (Corps) pursuant to Section 404 of the Clean Water Act. Construction activities regulated under federal law may not commence until a Water Quality Certification has been issued by the Chief of the Environmental Certification and Compliance Section of the New York State Department of Public Service Office of Electric, Gas and Water. Upon receipt of any and all permits, the Certificate Holder shall file notice of receipt of the permit(s) with the Secretary as soon as practical. Should any permits be denied, the Certificate Holder shall file with the Secretary documentation demonstrating the reasons for the denial and how it plans to proceed with its Project plans in light of the denial.

13. The Certificate Holder shall construct and operate the Facility in accordance with the substantive provisions of the applicable local laws as identified in Exhibit 31 of the Application and as further amended, revised, and adopted, except for those local laws the Siting Board waives as unreasonably burdensome, as stated in this Order Granting Certificate.

14. The Certificate Holder shall design and construct the Facility in accordance with those American National Standards Institute (ANSI) standards applicable and intended for use in a wind energy facility.

15. The Certificate Holder shall work with Niagara Mohawk Power Corporation, d/b/a National Grid (National Grid), and any successor Transmission Owner (as defined in the New York Independent System Operator (NYISO) Agreement), to ensure that, with the addition of the Facility (as defined in the Interconnection Agreement between the Certificate Holder, NYISO and National Grid), the system will have power system relay protection and appropriate communication capabilities to ensure that operation of the National Grid transmission system is adequate under Northeast Power Coordinating Council (NPCC) standards, and meets the protection requirements at all times of the North American Electric Reliability Corporation (NERC), NPCC, New York State Reliability Council (NYSRC), NYISO, and National Grid, and any successor Transmission Owner (as defined in the NYISO Agreement).

16. The authority granted in the Certificate and any subsequent Order(s) in this proceeding is subject to the following conditions necessary to ensure compliance with such Order(s):

    a) The Certificate Holder shall regard the Department of Public Service Staff (Staff or DPS Staff), authorized pursuant to PSL §66(8), as the Siting Board's representatives in the field and, after the Siting Board's jurisdiction has ceased, as the Public Service Commission's (Commission) representatives in the field. In the event of an emergency resulting from the specific construction or maintenance activities that violate, or may violate, the terms of the Certificate, Compliance Filings, or any other order in this proceeding, such DPS Staff may issue a stop work order for that location or activity. For the purposes of this Condition, "emergency" means the creation of a condition that could not be readily reviewed and that has a high likelihood of creating a significant adverse risk to public health or safety or damage to a sensitive environmental resource.

    b) A stop work order shall expire 24 hours after issuance unless confirmed by the Siting Board, or the Commission after the Siting Board's jurisdiction has ceased, including by Order issued by the Chair of the Siting Board or by one Commissioner of the Commission. DPS Staff shall give the Certificate Holder notice by electronic mail of any application to the Siting Board or Commissioner to have a stop work order confirmed. If a stop work order is confirmed, Certificate Holder may seek reconsideration from the confirming Commissioner, Siting Board or the whole Commission. If the emergency prompting the issuance of a stop work order is resolved to the satisfaction of DPS Staff, the stop work order will be lifted. If the emergency has not been satisfactorily resolved, the stop work order will remain in effect.

    c) Stop work authority shall be exercised with consideration of potential environmental impact, economic costs involved, possible impact on construction activities, and whether an applicable statute or regulation is violated. Before exercising such authority, DPS Staff will consult wherever practicable with the Certificate Holder's representative(s) possessing comparable authority. Within reasonable time constraints, all attempts will be made to address any issue and resolve any dispute in the field. In the event the dispute cannot be resolved, the matter will be brought immediately to the attention of the Certificate Holder's Project Managers and the Director of the DPS Office of Electric, Gas and Water. If DPS Staff issues a stop work order, neither the Certificate Holder nor the Contractor will be prevented from undertaking any safety-

related activities as they deem necessary and appropriate under the circumstances. Issuance of a stop work order or the implementation of measures as described below may be directed at the sole discretion of DPS Staff during these discussions.

d) If DPS Staff discovers a specific activity that represents a significant environmental threat that is, or immediately may become, a violation of the Certificate, Compliance Filings, or any other Order in this proceeding, DPS Staff may -- in the absence of responsible Certificate Holder supervisory personnel, or in the presence of such personnel who, after consultation with DPS Staff, refuse to take appropriate action -- direct the field crews to stop the specific potentially harmful activity immediately. If responsible Certificate Holder personnel are not on site, DPS Staff will immediately thereafter inform the Certificate Holder's construction supervisor(s) and/or environmental monitor(s) of the action taken. The stop work order may be lifted by DPS Staff if the situation prompting its issuance is resolved. The Certificate Holder shall promptly notify the host town(s) of any stop work order issued by DPS Staff and shall immediately inform the town(s) once the stop work order has been lifted.

17. The Certificate Holder shall notify its contractors that the Siting Board may seek to recover penalties for any violation of the Certificate and other orders issued in this proceeding, not only from such Certificate Holder, but also from its contractors and that contractors also may be liable for other fines, penalties, and environmental damage.

18. Compliance Filings submitted pursuant to 16 NYCRR §1002.2 - 1002.3 may not be used to request an amendment to the Certificate.

19. Activities required to enable engineering and environmental surveys and access for testing necessary for preparation of final facilities design, Compliance Filings, and site plan preparation, including minor trimming, cutting, and removal of vegetation and trees for such purposes, are not considered construction. Grading or other earth-moving activities may not be performed as part of any pre-construction surveys.

III. Notifications

20. At least 14 days prior to the Commencement of Full Construction, defined as the beginning of continuous earthmoving activities for construction of the entire Facility, but not including delivery of construction equipment to the site, tree-clearing activities for testing or surveying (such as geotechnical drilling and meteorological testing) to determine the adequacy of the site for construction, or activities authorized by one of the LNTP packages outlined in Attachment A, the Certificate Holder shall provide a Pre-Construction Notice as follows:

a) Provide notice by mail to host landowners, adjacent landowners within 5,000 feet of the final layout to be constructed, and persons who reside on such property (if different from the landowner);

b) Provide notice to local Town and County officials and emergency personnel;

c) Publish notice in the local newspapers of record (Cuba Patriot and Arcade Herald) for dissemination and in the local newspaper of largest circulation, including at least one free publication if available;

d) Provide notice for display in public places, which will include, but not be limited to, the Town Halls of the host municipalities, at least one library in each host municipality, at least one post office in each host municipality, the Facility website, and the Facility construction trailers/offices; and

e) File notice with the Secretary for posting on the DPS Document Matter Management website.

21. The Certificate Holder shall write the Pre-Construction Notice in language reasonably understandable to the average person and shall ensure that the notice(s)contain:

a) A map of the Project;

b) A brief description of the Project;

c) The construction schedule and transportation routes;

d) The name, mailing address, local or toll-free telephone number, and email address of the Project Development Manager and Construction Manager;

e) The procedure and contact information for registering a complaint; and

f) Contact information for the Siting Board and Commission.

22. Upon distribution of the Pre-Construction Notice, and prior to Commencement of Construction, the Certificate Holder shall notify the Town Boards of all areas where information regarding the Project, Project activities, and Project contact information have been posted.

23. At least seven (7) business days prior to Commencement of Construction, the Certificate Holder shall file with the Secretary an affirmation that it has provided the notifications required by this Section III and include a copy of the notice(s) under this Section as well as a distribution list.

24. Prior to the end of construction, the Certificate Holder shall notify the entities identified in Condition 20(a), 20(b), and 20(e) with the contact name, telephone number, email and mailing address of the Facility Operations Manager.

25. The Certificate Holder shall file a written notice with the Secretary within 14 days of the completion of construction and provide an anticipated date of commencement of commercial operation of the Facility.

26. Within 14 days of the completion of final post-construction restoration, the Certificate Holder shall notify the Secretary that all such restoration has been completed in compliance with this Certificate and the Order(s) approving all applicable compliance filings.

IV. Information Reports and Compliance Filings and Other Requirements

27. Attachment A Packages: The Certificate Holder shall file with the Siting Board the plans, reports, drawings, computer files, and other documents specified in Attachment A.

a) Items identified in Attachment A as Information Reports shall be filed in accordance with 16 NYCRR §1002.4.

b) Items identified in Attachment A as Compliance Filings shall be filed in accordance with the rules for submittal, public comment, and decisions set forth in 16 NYCRR §1002.2 – 1002.3.

c) The Certificate Holder may file Attachment A items at any time, but the Siting Board will not approve any Compliance Filings prior to the issuance of a Certificate.

28. Interconnection:

a) Any updates or revisions to the Interconnection Agreement shall be submitted throughout the life of the Project.

b) Except in the event of an emergency, if any equipment or control system with different characteristics is installed throughout the life of the Project, the Certificate Holder shall, at least 90 days before any such change is made, provide information regarding the need for, and the nature of, the change to National Grid and file such information with the Secretary. If any such change(s) is made in the event of an emergency, the Certificate Holder shall notify the Secretary as soon as practicable, within one week of the date of installation.

29. Any updated facilities agreements will also be filed throughout the life of the Facility.

30. Any System Reliability Impact Study (SRIS) required as part of a future Facility modification or upgrade, performed in accordance with the NYISO Open Access Transmission Tariff (OATT) approved by the Federal Energy Regulatory Commission, and all appendices thereto, reflecting the interconnection of the Facility.

31. Prior to Certificate Holder providing final design plans and profile drawings of the interconnection facilities, the Certificate Holder shall work with National Grid to ensure such documents are in accordance with the Interconnection Agreement and National Grid's Electric System Bulletins, as well as the New York State High Voltage Proximity Act.

32. A Relay Coordination Study that has been reviewed and accepted by National Grid shall be filed 30 days after commencement of commercial operation of the Facility.

33. Reserved.

34. Reserved.

35. Reserved.

36. Reserved.

37. If relevant Project plans require modifications due to conditions of federal, state, or local permits, the final design drawings and all applicable compliance filings shall be revised accordingly and submitted for review and approval pursuant to 16 NYCRR §1002.2 and §1002.3.

38. Reserved.

39. Reserved.

40. The final Facility design shall incorporate the following measures for visual impact minimization:

    a) Advertisements, conspicuous lettering, or logos identifying the Facility owner, turbine manufacturer, or any other entity on the turbines shall not be allowed;

    b) White or off-white color of wind turbines, towers and blades (as required by the FAA to avoid the need for daytime aviation hazard lighting) shall be utilized; and non-reflective finishes used on wind turbines to minimize reflected glare;

    c) Medium-intensity red strobe lights on turbines for aviation hazard marking, and the extent of lighting will be minimized to the extent allowable by the FAA; ACWE shall provide documentation showing that it has requested feasibility analysis from the FAA/DoD for the use of aircraft detection lighting system(s) (ADLS) or other lighting minimization technologies or techniques at the Facility; and

    d) Lighting shall be designed and installed to minimize offsite lighting impacts; lighting controls at substations, turbines and turbine sites shall be maintained in accordance with good utility practice.

41. Reserved.

42. Water Supply Protection:

    a) No wind turbine shall be located within 100 feet of an existing, active water supply well or water supply intake.

    b) Blasting shall be prohibited within 500 feet of any existing, active water supply well or water supply intake on a non-participating parcel. Blasting may be performed within 500 feet of an existing, active water supply well on a participating parcel if prior approval is provided to the Certificate Holder by the property owner.

    c) If environmental or engineering constraints require siting of any collection lines or access roads within 100 feet of an existing, active water supply well or any turbines within 1,000 feet of an existing, active water supply well on a non-participating parcel, the Certificate Holder shall engage a qualified third party to perform pre- and post-construction testing of the potability of water wells within the above specified distances of construction disturbance before commencement of construction and after completion of construction to ensure the wells are not impacted, unless such testing is refused by the property owner.

    d) Should the third-party testing conclude that Facility construction has adversely impacted potability of an existing, active water supply well, the Certificate Holder shall cause a new water well to be constructed, in consultation with the property owner, at least 100 feet from collection lines and access roads, and at least 1,000 feet from wind turbines.

43. Reserved.

44. Reserved.

45. Prior to commencement of construction, a *Final Decommissioning Plan* shall be submitted as a compliance filing for approval by the Siting Board. Letters of credit will be established by the Certificate Holder to be held by each town hosting Facility components. The total amount of the letters of credit

created for the Towns of Arcade, Centerville, Rushford, Farmersville, and Freedom will represent the total final decommissioning and site restoration estimate, as described below with each town holding a separate letter of credit based on the number of turbines it is hosting. Decommissioning and site restoration costs associated with the proposed collection substation will be included in the Town of Freedom's letter of credit. The letters of credit shall remain active until the Facility is fully decommissioned. The *Final Decommissioning Plan* will include the following:

a) A final decommissioning and site restoration estimate (no offset for projected salvage value is permitted in the calculation of the estimate). The estimate will be calculated by multiplying the decommissioning and site restoration cost per turbine (which includes the dollar amount estimate for removal of one turbine and foundation in addition to the other overall decommissioning and site restoration costs (including removal of meteorological towers and removal and restoration of access roads) spread out equally among the total proposed turbines of the Facility) by the total number of turbines proposed for the Project. The estimate shall be updated by a qualified independent engineer licensed to practice engineering in the State of New York to reflect inflation and any other changes after one year of Facility operation, and every fifth year thereafter. Updated estimates will be filed with the Secretary after one year of Project operation and every fifth year thereafter;

b) Documentation indicating approval by the Towns of Arcade, Centerville, Rushford, Farmersville, and Freedom of an acceptable form of letter of credit;

c) Proof that the letters of credit have been obtained in the final decommissioning and site restoration estimate amount, as calculated pursuant to the *Final Decommissioning Plan*;

d) Letters of credit shall be updated after one year of Facility operation and every fifth year thereafter, based on updated estimates described in sub-section a of this condition. Documentation shall be filed with the Secretary after one year of Project operation and every fifth year thereafter specifying changes to the structure of the letters of credit;

e) Copies of agreements between the Certificate Holder and the Towns, establishing a right for each Town to draw on the letters of credit dedicated to its portion of the Facility;

f) Prior to the commercial operation date, the Certificate Holder shall file with the Secretary wind turbine design verification information reports for each model proposed for the Project, verifying that the wind turbines were designed in accordance with International Electrotechnical Commission (IEC) 61400; however, any wind turbine model(s) failing to be design verified, and therefore, not adhering to applicable IEC 61400 criteria shall be decommissioned prior to commercial operation at the Certificate Holder's expense; and

g) Procedures for notifying host communities and landowners of decommissioning and restoration activities

46. During project construction and operation, the Certificate Holder shall follow the *Final Complaint Handling Procedure,* which shall be filed as a compliance filing prior to construction for approval by the Siting Board. If the complaint resolution process determines that Facility operation has resulted in impacts to existing off-air television coverage, the Certificate Holder shall address each individual problem by investigating methods of improving the television reception system. Should this prove ineffective, cable television or equivalent service shall be offered (in areas where cable service is available), or in areas where cable service is not available or not practical, direct broadcast satellite reception systems.

47. Replacement of major Facility components, such as wind turbines, with different make, model, size, or other material modification, shall be subject to review and approval under appropriate authority of the Siting Board.

48. The Certificate Holder shall maintain the wind turbines in accordance with manufacturer's required maintenance schedules or its own schedule that assures a commercially reasonable level of reliability and safety.

49. The Certificate Holder shall file construction and operations version of its emergency response plans. The Certificate Holder shall file annually with the Secretary an updated copy of its emergency response plan, including any changes to the list of emergency contacts.

50. Exterior lighting should be designed to provide safe working conditions at appropriate locations and to avoid off-site lighting effects, by: (i) using task lighting as appropriate to perform specific tasks; (ii) designing task lighting to be capable of manual or auto-shut off switch activation rather than motion detection (including lighting in the substation); and (iii) using full cutoff fixtures, with no drop- down optical elements (that can spread illumination and create glare), for permanent exterior lighting except for FAA lights, turbine door lighting, and task lighting.

51. The Certificate Holder shall coordinate with the State, County, and local municipalities to respond to any locations that may experience any traffic flow or capacity issues.

52. Reserved.

53. Reserved.

54. Reserved.

55. Reserved.

56. Blasting:

    a) Blasting operations in locations where geotechnical investigations confirm the presence of subsurface karst or pseudokarst features shall be limited or performed under specific procedures recommended for those locations by a geotechnical engineer and in accordance with a Blast Monitoring Plan that is developed in consultation with NYSDEC and DPS Staff.

    b) The Blasting Monitoring Plan shall include procedures and timeframes for notifying host communities and property owners within one-half mile radius of the blasting site.

    c) The Certificate Holder shall offer pre-blast surveys for all residences, wells, and structures within 500 feet of blasting locations. Pre-blast surveys shall include photos and a written report, signed and dated by the property owner, noting both existing damage to the property and undamaged areas.

    d) Pre-blasting notifications shall include information regarding filing a complaint.

57. *Shadow Flicker Impacts Analysis, Control, Minimization and Mitigation Plan*. Shadow flicker caused by wind turbine operations shall be limited to a maximum of 30 hours annually at any non-participating residential structure, subject to verification using shadow detection and operational controls at appropriate wind turbines. The *Shadow Flicker Impacts Minimization and Mitigation Plan* shall include:

a) updated analysis of realistic and receptor-specific predicted flicker based on final proposed design;

b) a protocol for monitoring operational conditions and potential flicker exposure at the wind turbine locations identified in the updated analysis, based on meteorological conditions;
c) details of the shadow detection and prevention technology or operational measures that will be adopted for real-time meteorological monitoring or operational control of turbines;

d) temporary turbine shutdowns during periods that produce flicker; and

e) shielding or blocking measures (such as landscape plantings and window treatments) for receptor locations that submit complaints for exposures that are not subject to the 20-hour or 30-hour annual limits.

Details of flicker control, minimization and mitigation measures shall be indicated on final design drawings and standards, and site plans as appropriate.

58. Reserved.

59. The Certificate Holder shall avoid or minimize impacts to archeological and historic resources to the extent practicable consistent with SHPO requirements regarding an off-set plan. Construction, including site preparation, clearing or other disturbance, shall not be allowed in any areas that have not been subject to part of studies performed in consultation with the NYSOPRHP. A final Unanticipated Discovery Plan meeting SHPO specifications shall be provided as an Information Report.

60. To achieve full avoidance of impacts to Northern Long Eared Bats (Myotis septentrionalis) (NLEB) and minimize impacts to other bat species, the Certificate Holder shall implement the following curtailment regime, to be included in a Curtailment Plan which shall be provided prior to the commencement of commercial operation:

a) from May 1 through June 30 when wind speeds at hub height are less than or equal to 5.0 m/s, turbine curtailment shall be in place at all turbines every year of operation on every night during the period, from ½ hour before sunset to ½ hour after sunrise, when ambient air temperature is equal to or greater than 50 degrees Fahrenheit (10 degrees Celsius); and

b) from July 1 through September 30 when wind speeds at hub height are less than or equal to 6.9 m/s, turbine curtailment shall be in place at all turbines every year of operation on every night during the period, from ½ hour before sunset to ½ hour after sunrise, when ambient air temperature is equal to or greater than 50 degrees Fahrenheit (10 degrees Celsius).

61. The Certificate Holder shall submit a review of curtailment operations at least once every five years to DPS and DEC. The review will assess if changes in technology or knowledge of impacts to bats supports modification of the existing curtailment regime. Modifications to the existing curtailment regime that further decrease mortality may be proposed or negotiated. Any such modifications shall not be costlier than the existing curtailment regime, unless voluntarily supported by the Certificate Holder.

62. In the event full avoidance is impracticable for Northern Long Eared Bats (Myotis septentrionalis) (NLEB), a Curtailment Plan shall be provided prior to the commencement of commercial operation for minimization of impacts to bat species, which shall include:

a) Description and implementation of a curtailment regime during the period July 1 through October 1 requiring a minimum curtailment at a wind speed no less than 5.5 m/s as developed in consultation with DEC and DPS Staff, 30 minutes prior to sunset through 30 minutes after sunrise, when temperatures are greater than 10 degrees Celsius.
b) Description and implementation of a blade feathering protocol from April 1 through June 30, and October 2 through October 31, requiring feathering of all Project wind turbines when wind speeds are below the wind turbines normal cut-in-speed (3.0 – _3.5 m/s), 30 minutes prior to sunset through 30 minutes after sunrise, when temperatures are greater than 10 degrees Celsius.

In addition, the Certificate Holder shall propose for Siting Board approval as a compliance filing a final Net Conservation Benefit Plan (NCBP) for the total calculated NLEB over the life of the Project, based on the proposed curtailment regime and using the take estimates established by DEC in this proceeding. The NCBP shall be prepared in consultation with DEC and DPS prior to filing. In the event that the final NCBP is not filed and approved or if mitigation measures are not implemented, prior to commencement of operation of the Project, the Certificate Holder shall implement the curtailment regime for full avoidance. A final NCBP for the take of NLEB shall be filed within six months after the date of issuance of the Certificate. The NCBP for the take of NLEB shall be prepared in consultations with DEC and DPS Staff and shall meet the requirements of 6 NYCRR §182.11. At a minimum, the NCBP shall contain:

a) a demonstration, to the satisfaction of DEC and DPS Staff, that measures to fully avoid impacts to NLEB is impracticable;
b) a demonstration that the mitigation actions described in the NCBP will result in a net benefit to NLEB species and not solely an offset for any potential take of individuals;
c) the location(s) and size of the mitigation parcel(s);
d) proof of access to and right to perform land management activities on the mitigation site(s);
e) identification of all persons that will be involved in implementing the NCBP, with individuals responsible for funding and implementing the plan clearly identified;
f) the signatures of all persons that will be involved in implementing the NCBP;
g) the management and maintenance actions required to achieve net conservation benefit for impacted species;
h) a schedule for undertaking these activities;
i) an appropriate post-construction monitoring program to determine the effectiveness of the mitigation;
j) adaptive management options and next steps to be implemented if the permitted level of take of NLEB is exceeded; and
j) a letter of credit or other financial guarantee securing the Applicant's ability to execute such management, maintenance and monitoring for the 30-year life of the Project.

63. The Certificate Holder shall propose for Siting Board approval as a compliance filing a final NCBP for the total calculated take of bald eagles over the life of the Project established by DEC in this proceeding. The NCBP shall be prepared in consultation with DEC prior to filing, meeting the requirements of 6 NYCRR Part 182. The final NCBP for the take of bald eagles shall be filed 90 days before the start of Project operation. At a minimum, the NCBP for bald eagles shall contain:

a) demonstration that the mitigation actions will result in a positive benefit to the Bald Eagle species and not just an offset for any potential take of individuals;

b) detailed net benefit calculations;

c) if applicable, location(s) and size(s) of mitigation parcels;

d) Identification of all persons that will be involved in implementing the Net Conservation Benefit Plan, with individuals responsible for funding and implementing the plan clearly identified;

e) the signatures of all persons that will be involved in implementing the Net Conservation Benefit Plan;

f) adaptive management options and next steps to be implemented if the permitted level of take is exceeded; and

g) a letter of credit or other financial guarantee securing the Applicant's ability to execute such management, maintenance and monitoring for the 30-year life of the Project.

64. Reserved.

65. To avoid impacts to State forests, the Certificate Holder shall comply with the following:

a) Turbines in proximity to State Forests must adhere to all local setback requirements or the Minimum State Forest Setback (no less than 1.1 x tip height from the boundary of a State forest), whichever is greater; and

b) All transmission lines in State Forests shall be underground and directional boring shall be used to install such underground lines in State Forests.

66. Reserved.

67. Reserved.

V. Noise and Vibration

68. The Certificate Holder shall present to the Siting Board, or the Commission after the Siting Board's jurisdiction has ceased, by filing with the Secretary at a minimum of 60 days prior to the start of construction:

a) Final drawings and details of the Wind Generating Facility, as well as final construction drawings incorporating any appropriate changes to the design and details, including:

(i) Location of the turbines identified with Geographic Information System (GIS) coordinates and GIS files.

(ii) Turbine dimensions to include hub height and diameter of tip blades rotation.

b) Proposed grading and turbine ground elevations. Site plan and elevation details, of substations as related to the location of all relevant noise sources (transformers, emergency generator, reactors, if any), any identified mitigations, specifications, and appropriate clearances for sound walls,

barriers, mufflers, silencers, and enclosures, if any. Sound information from the manufacturers for all relevant noise sources shall also be presented.

c) Sound Power levels from the turbines by following these provisions:

(i) Sound Power levels from the turbines selected for the project shall be documented with information from the manufacturers based on tests that determined sound power levels following the International Electrotechnical Commission (IEC) 61400-11 standard and Technical Specification IEC TS 61400-14 (2005-1st edition), if available.

(ii) Sound Power Information will be reported associated with wind speed magnitudes, angular speed of the rotor, and rated power to the extent this information is available. The Sound Power Information will include specifications for Noise Reduced Operations and Low-Noise Trailing Edges if these are available or required to meet the noise conditions of this Certificate.

d) Revised sound modeling with the specifications of the wind turbine model selected for construction to demonstrate that the Project is modeled to meet the Local Laws on Noise and the regulatory limits of Condition 72. The revised sound modeling will include a cumulative noise assessment that includes noise from any proposed, existing, or approved Wind Generation Facility adjacent to the approved project area. In this case, the evaluation will include any adjacent wind turbine within a 2-mile radius from any wind turbine from the Facility.

(i) If noise reduction operations (NRO's) are used to demonstrate conformance with any Certificate Condition or local law on noise in a compliance filing, those NRO's shall be implemented at the start date of operations;
(ii) a compliance filing shall use less than half of the maximum NRO available for each turbine model;
(iii) Sound levels shall be evaluated at either 4.0 meters with no uncertainty added, or at 1.5 meters with a 2 dBA correction for uncertainty added.

In addition, the revised sound modeling will show conformance with the following design goals:

(v) 45 dBA Leq (8- hour) at any permanent or seasonal non-participant residence existing as of the issuance date of this Certificate and 55 dBA Leq (8-hour) for any participant residence existing as of the issuance date of this Certificate.

(vi) 40 dBA L(night-outside), annual equivalent continuous average nighttime sound level from the Facility outside any existing non-participating residence and 50 dBA L(night-outside) for participating residences.

(vii) 55 dBA Leq (8- hour), equivalent continuous average sound level from the Facility across any portion of a non-participating property except for portions delineated as wetlands. This shall be done by rendering sound contour drawings for the final design including all boundary lines within the Project Area, participating status, and wet land delineations. Statements indicating whether the final design complies with this Certificate Condition will also be included.

(viii) 65 dBZ L(1-hour), maximum 1-hour equivalent continuous average sound level from the Facility at the 16 Hz, 31.5 Hz, and 63 Hz full octave bands outside any existing non-participating residence.

69. Compliance with noise-related Certificate Conditions for the Facility shall be evaluated by the Certificate Holder by following a Sound Testing Compliance and Noise Complaint Protocol that shall follow the provisions and procedures for post-construction noise performance evaluations as Attachment B to the Order.

70. At least two Sound Compliance Tests conforming to the compliance protocol required by the Certificate Conditions shall be performed by the Certificate Holders after the commercial operations date of the Facility: One during the "leaf-off" season and one during the "leaf-on" season.

a) Within seven months of the commercial operations date of the Facility, the Certificate Holders shall perform and complete the first Sound Compliance Test and the results shall be submitted to the Siting Board, or the Commission after the Siting Board's jurisdiction has ceased, by filing with the Secretary a report from an independent acoustical or noise consultant, no later than eight months after the commercial operations date, specifying whether or not the Facility is found in compliance with all Certificate Conditions on noise of this Certificate during the "leaf-on" or "leaf-off" season as applicable.

b) The second Sound Compliance Test shall be performed and results shall be submitted to the Siting Board, or the Commission after the Siting Board's jurisdiction has ceased, by filing with the Secretary subject to the same conditions contained in sub-condition 70(a), but no later than thirteen (13) months after the commencement of operations of the Facility.

71. If the results of the first or the second Sound Compliance Tests, or any subsequent Sound Compliance Test performed by the Certificate Holder or any Violation Tests performed by DPS, or any test performed in response to complaints, indicate that the Facility, related facilities and ancillary equipment do not comply with all Certificate Conditions on noise contained in this Certificate, the Certificate Holder shall:

a) Present minimization options to the Siting Board, or the Commission after the Siting Board's jurisdiction has ceased, by filing with the Secretary within 60 days after the filing of a noncompliance test result or the finding of a non-compliance or violation of Certificate Conditions on noise of this Certificate:

(i) Operational minimization options related to noise or vibrations caused by the wind turbines that shall be considered, including, at a minimum, modifying or reducing time of turbine operation, incorporating noise reduced operations, shutting down relevant turbines, and modifying operational conditions of the turbines.

(ii) Physical minimization options related to noise or vibration caused by the wind turbines that shall be considered, including installation of serrated edge trails on the turbine blades, replacement or maintenance of noisy components of the equipment, and any other measures as feasible and appropriate.

(iii) If applicable, any minimization measures related to noise from transformers (such as walls or barriers) and emergency generators (such as installation of noise walls or barriers, adding or replacing enclosures or silencers to the emergency generator) if any, or any other mitigation measures as appropriate.

b) Implement any operational noise mitigation measures within 90 calendar days after the finding of a non- compliance or violation situation, as necessary to achieve compliance.

c) Implement any physical noise mitigation measures within 150 days after the finding of a non-compliance or violation situation, as necessary to achieve compliance.

d) Not operate the turbines of the Facility that caused the violation if the minimization measures are not implemented within the schedules specified in this Certificate Condition, and not operate the turbines without the operational or physical minimization measures that are presented and approved by the Siting Board, or the Commission after the Siting Board's jurisdiction has ceased after they are implemented as specified in these Certificate Conditions.

e) Test, document and present to the Siting Board, or the Commission after the Siting Board's jurisdiction has ceased, by filing with the Secretary results of any minimization measures and compliance with all Certificate Conditions on noise of this Certificate, no later than 90 days after the minimization measures are implemented.

72. Noise levels from the all noise sources from the Wind Generating Facility, related facilities and ancillary equipment shall:

a) Comply with a maximum noise limit of 45 dBA Leq (8- hour) at any permanent or seasonal non-participant residence existing as of the issuance date of this Certificate ("N-P Residences") and 55 dBA Leq (8-hour) for any participant residence existing as of the issuance date of this Certificate ("Participating Residences").

b) Not produce any audible prominent tones, as defined under ANSI Sl2 .9 Part 4-2005 Annex C at any N-P Residences existing as of the issuance date of this Certificate. Should a prominent tone occur, the broadband overall (dBA) noise level at the evaluated position shall be increased by 5 dBA for evaluation of compliance with sub-condition 72(a).

c) Comply with a maximum noise limit of 65 dB Leq-1-h at the full octave frequency bands of 16, 31.5, and 63 Hertz outside of any N-P Residences existing as of the issuance date of this Certificate in accordance with Annex D of ANSI standard Sl2 .9- 2005/Part 4 Section D.2.(1)(Analysis of sounds with strong low-frequency content).

d) Not produce human perceptible vibrations inside any N-P Residences existing as of the issuance date of this Certificate that exceed the limits for residential use recommended in ANSI Standard 52 .71-1983 (August 6, 2012) "Guide to evaluation of human exposure to vibration in Buildings."

e) Comply with a limit of 40 dBA Leq (1-hour) at the outside wall of any N-P Residences from the collector substation equipment, and subject to the tonal penalties of sub-condition 72(b).

Emergency situations are exempt from any of these limits.

73. The Certificate Holder shall adhere to the following condition regarding Complaints:

a) The Certificate Holder is required to maintain a log of complaints received relating to noise and vibrations caused by the operation of the Facility, related facilities and ancillary equipment. The log shall include name and contact information of the person that lodges the complaint, name of the property owner(s), address of the residence where the complaint was originated, the date and time of the day underlying the event complained of, and a summary of the complaint.

b) The Certificate Holder shall provide the Towns with a phone number, email address and mailing address where complaints can be notified, along with a form to report complaints designed according to the details required in subsection (a) of this condition.

c) All complaints received shall be reported to the Siting Board, or the Commission after the Siting Board's jurisdiction has ceased, monthly during construction and quarterly during operation, by filing with the Secretary during the first 10 calendar days of each month (or the first 10 days of each quarter after three years). Reports shall include copies of the complaints and, if available, a description of the probable cause (e.g., outdoor or indoor noise, tones, low frequency noise, amplitude modulation, vibrations, rumbles, rattles, etc., if known); the status of the investigation, summary of findings and whether the Facility has been tested and found in compliance with applicable noise Certificate Conditions or minimization measures have been implemented. If no noise or vibration complaints are received, the Certificate Holder shall submit a letter to the Secretary indicating that no complaints were received during the reporting period.

d) Should complaints related to excessive and persistent amplitude modulation occur at any N-P Residence existing as of the issuance date of this Certificate with measured or modeled sound levels exceeding 40 dBA Leq (1-hour), the Certificate Holder shall investigate and measure amplitude modulation at the affected receptors during the time frame when the worst conditions are known, or, if not known, expected, to occur. If the L90-10 minute noise levels (dBA), including any amplitude modulation and prominent tone penalties exceed a noise level of 45 dBA and amplitude modulation is in excess of a 5 dB modulation depth at the evaluated receptor(s) for more than 5% of the time during the identified time frame of evaluation (which will not exceed eight consecutive hours), the Certificate Holder shall continue with the investigation, identify frequency of occurrence and the conditions that may be favorable for its occurrence, and propose measures to avoid, minimize, or mitigate the impacts. Minimization measures that avoid, minimize, resolve or mitigate the amplitude modulation impacts shall be identified and reported to the Siting Board, or the Commission after the Siting Board's jurisdiction has ceased, by filing with the Secretary and implemented after review and approval. Compliance with this Certificate Condition shall be finally demonstrated by conducting a test that shows that the L90-10-minute sound levels (dBA), including a 5-dBA penalty for amplitude modulation (if amplitude modulation depth is in excess of 5 dB for more than 5% of the time in any eight consecutive hours) at that particular location and any additional prominent tone penalties, are lower than or equal to 45 dBA. For any complaints that do not exceed the limits established in the foregoing, the Certificate Holder should handle those complaints under its complaint resolution protocol.

e) The Certificate Holder shall investigate all other noise and vibration complaints by following the Complaint Protocol in, and consistent with the limits imposed by, these Certificate Conditions.

74. The Certificate Holder shall maintain a log of operational conditions of all the turbines with a 10-minute time interval to include at a minimum wind velocity and wind direction at the hub heights, angular speed of the rotors and generated power and notes indicating operational conditions that could affect the noise levels (e.g. maintenance, shutdown, etc.). A schedule and log of noise reduced operations for individual turbines shall also be kept and updated as necessary.

75. The Certificate Holder shall comply with the following conditions regarding construction noise:

a) Comply with all local laws regulating construction noise;

b) Maintain functioning mufflers on all transportation and construction machinery;

c) Respond to noise and vibration complaints according to the Protocols established in the Certificate Conditions.

VI. Facility Construction and Maintenance

General

76. At least 60 days prior to the start of construction, the Certificate Holder shall become a member of Dig Safely New York. The Certificate Holder shall require all contractors, excavators, and operators associated with its facilities to comply with the requirements of the Commission's regulations regarding the protection of underground facilities (16 NYCRR Part 753).

77. The Certificate Holder shall comply with all requirements of the Commission's regulations regarding identification and numbering of above ground utility poles/structures (16 NYCRR Part 217).

78. The Certificate Holder shall establish funding for an independent, third-party environmental monitor and an independent third-party full-time qualified agricultural professional or qualified agricultural drainage specialist with a degree or background in soil conservation, hydrology or agronomy to oversee compliance with environmental permit requirements. The Certificate Holder will solicit input from the designated representative of the Towns with respect to the selection of the Environmental Monitor. When soliciting input from the DPS Staff and the Towns, the Certificate Holder shall identify one or more candidates and provide qualifications and contact information for the Environmental Monitor. The monitors shall inspect construction sites and issues regular reports to the Certificate Holder, DPS, DEC, and NYSDAM. If the New York State Department of Agriculture and Markets (NYSDAM) agrees that the independent third-party environmental monitor is qualified on agricultural issues, one monitor can act as both environmental and agricultural monitor.

79. The environmental monitor shall have stop work authority over all aspects of the Project.

80. The Certificate Holder shall ensure that its monitors and construction supervisor are equipped with sufficient access to documentation, transportation, and communication equipment to effectively monitor such Certificate Holder's contractor's compliance with the environmental provisions of every Order issued in this proceeding with respect to such Certificate Holder's Project components and to those sections of the Public Service Law, Environmental Conservation Law, and Section 401 Water Quality Certification.

81. At least 14 days before the commencement of construction, the Certificate Holder shall hold a pre-construction meeting with DPS Staff, NYSDAM Staff, NYSDOT, Town Supervisors, and Town and County Highway Departments, and DEC. The Balance of Plant (BOP) construction contractor and the environmental compliance monitor shall be required to attend the preconstruction meeting.

    a) At least 10 days prior to the pre-construction meeting, the Certificate Holder shall notify invitees of the proposed meeting time and date. An agenda, the location, and an attendee list shall be agreed upon between DPS Staff and the Certificate Holder and distributed to the attendee list at least one week prior to the meeting;

    b) Maps showing designated travel routes, construction worker parking and access road locations and a general project schedule shall be distributed to the attendee list at least one week prior to the meeting;

c) The Certificate Holder shall supply draft minutes from this meeting to the invitees list for corrections or comments, and thereafter the Certificate Holder shall issue the finalized meeting minutes;

d) If, for any reason, the BOP Contractor cannot finish the construction of the Project, and one or more new BOP contractors are needed, there shall be another preconstruction meeting with the same format as outlined above.

82. The Certificate Holder shall train construction personnel to identify timber rattlesnakes. If, at any time during construction of the Project, a timber rattlesnake is located or observed in the Project area, the Certificate Holder shall: (1) immediately cease activities and evacuate construction personnel within a 20-yard buffer of the individual; and (2) not disturb, harm, or handle the individual. If the individual snake does not leave the area of construction activities and relocation of the individual is necessary, NYSDEC shall be notified of the occurrence and relocation efforts. Relocation shall be conducted by an individual licensed to handle and relocate timber rattlesnakes. Activities shall not recommence in and construction personnel shall not enter the 20-yard buffer of the individual until the individual departs or is relocated by the personnel licensed to perform relocation.83. Construction and routine maintenance activities on the Project shall be limited to 7:00 a.m. to 7:00 p.m or daylight hours outside of this window, Monday through Saturday.

a) Construction work hour limits apply to Facility construction and maintenance, and to construction- related activities including delivery and unloading of materials, maintenance and repairs of construction equipment at outdoor locations, large vehicles idling for extended periods at roadside locations, and related disturbances.

b) If, due to safety or continuous operation requirements, maintenance or construction activities are required to occur on Sundays or beyond the allowable work hours Monday through Saturday, the Certificate Holder shall notify DPS Staff, affected landowners and the municipalities. Such notice shall be given at least 24 hours in advance, unless such maintenance or construction activities are required to address emergency situations threatening personal injury, property, or severe adverse environmental impact that arise less than 24 hours in advance;

c) Construction work hour limits apply to facility construction, and to construction-related activities including the delivery and unloading of materials, and maintenance and repairs of construction equipment at outdoor locations, since these activities can result in extensive noise, large vehicles idling for extended periods at roadside locations, and related disturbances.

84. At least 48 hours before tree clearing or construction begins in any portion of the Facility Site, the Certificate Holder shall stake or flag the planned limits of disturbance (LOD), the boundaries of any delineated wetlands or streams in the LOD, and any known archeological sites inside or within 100 feet of the LOD on participating property. In addition, the archeological sites shall be surrounded with construction fencing and a sign stating restricted access.

85. The Certificate Holder shall confine construction and subsequent maintenance for its Project Components to the Facility site and approved additional work areas, as delineated in approved site plans. If a local contractor is used for the work, the local contractor’s facility may also be used as a marshaling yard.

86. Construction status reporting and site inspections: Bi-Weekly Status Reports:

a) The Certificate Holder shall provide the Towns, DPS Staff, NYSDEC, and NYSDAM with bi-weekly status reports summarizing the status of construction activities and indicating the schedule and locations of Project construction activities for the upcoming two-week period.

Monthly Inspections:

b) The Certificate Holder shall organize and conduct monthly site-compliance inspections for DPS Staff as needed during construction and restoration of the Facility site. The Certificate Holder will provide the Towns documentation generated as part of such inspections.

c) The Certificate Holder shall ensure that the required safety procedures and worksite hazards are communicated to site inspectors in a documented tailboard meeting prior to entry onto the site of work on such Certificate Holder's Project Components.

d) The monthly inspections shall include a review of the status of compliance with all conditions contained in the Certificate and any other Order issued in this proceeding, as well as a field review of the Project site, if necessary. The inspection also may include:

(i) Review of all complaints received, and their proposed or actual resolutions;

(ii) Review of any significant comments, concerns, or suggestions made by the public, local governments, or other agencies and indicate how the Certificate Holder has responded to the public, local governments, or other agencies;

(iii) Review of the status of the Project in relation to the overall schedule established prior to the commencement of construction; and

(iv) Other items the Certificate Holder or DPS Staff consider appropriate.

e) The Certificate Holder shall provide a written record of the results of the inspection, including resolution of issues and additional measures to be taken, to the Towns and agencies involved in the inspection audit.

Environmental

87. All construction vehicles must be equipped with a spill kit. Any leaks must be stopped and cleaned up immediately.

88. Any debris or excess construction materials shall be removed to a facility duly authorized to receive such material. No burying of construction debris or excess construction materials will be allowed.

89. Cleared vegetation and slash will not be (i) burned anywhere or (ii) buried within a wetland or adjacent area.

90. Tree and vegetation clearing shall be limited to the minimum necessary for Facility construction and operation. Surrounding trees and vegetation will not be cut down on any property solely to reduce turbulence or increase wind flow to the Facility.

91. In connection with vegetation clearing, the Certificate Holder shall:

a) comply with the provisions of 6 NYCRR Part 192, Forest Insect and Disease Control, and ECL § 9-1303 and any quarantine orders issued thereunder;

b) not create a maximum wood chip depth greater than three inches, except for chip roads (if applicable), nor store or dispose wood chips in wetlands, within stream banks, delineated floodways, or active agricultural fields; and

c) coordinate with landowners to salvage merchantable logs and fuel-wood. Where merchantable logs and fuel-wood will not be removed from the site during clearing activities, plans shall indicate locations of stockpiles to be established for removal from site or future landowner resource recovery.

92. Erosion control fabric or netting must be 100% biodegradable natural product, excluding silt fence. Use of hay for erosion control or other construction-related purposes is prohibited to minimize the risk of introduction of invasive plant species.

93. The Certificate Holder shall implement all practical measures to achieve a minimum of 80% vegetative cover across all disturbed soil areas by the end of the first full growing season following construction.

94. The Certificate Holder shall restore disturbed areas, ruts, and rills to original grades and conditions with permanent re- vegetation and erosion controls appropriate for those locations. Disturbed roadways shall be restored to their original preconstruction condition or improved.

Threatened and Endangered Species

95. To reduce mortality to, or other take of:

a) bats during construction, all tree clearing activities shall (except for hazard tree removal) be conducted between October 1 and March 31 in all occupied habitat areas and unless otherwise approved by DPS Staff, in consultation with NYSDEC. No tree clearing activities shall occur at any time within 150 feet of any NLEB maternity roosts. All tree clearing activities occurring within one and one half (1.5) miles of the maternity roost site shall be conducted during hibernation season between October 1 and March 31. This limitation does not include trees less than or equal to 3 inches in diameter at breast height (DBH). No Project components shall be sited or located within 150 feet if any NLEB maternity roost.; or

b) Reserved.

c) bald eagles during construction, no Project components shall be placed within one quarter (1/4) mile of any Bald Eagle nest. All ground disturbance, tree clearing, construction, restoration and maintenance activities within six hundred sixty (660) feet of a nest and within one quarter (1/4) mile of a nest that are not obscured by an adequate visual barrier shall be conducted between October 1 and December 31.

96. If at any time during construction and operation of the Facility:

a) an active nest of any federally, or State, listed threatened or endangered bird species (with the exception of bald eagles) or bat species is discovered within the Facility site, the regional DEC Natural Resource Supervisor and DPS Staff will be notified within 24 hours of discovery, and the nest or roost site will be marked. An area 500 feet (660 feet for northern harrier, short-eared owl, upland sandpiper, or Henslow's sparrow) in radius around the nest or roost will be posted and avoided to the maximum extent practicable until notice to continue construction, ground clearing,

grading, maintenance or restoration activities, as applicable, at that site is granted by DPS Staff, in consultation with the regional DEC Natural Resource Supervisor;

b) any other listed species, or species of special concern is observed, the Certificate Holder shall maintain a record of the observation and (i) during construction the onsite environmental monitors shall be responsible for recording all such observations, and the observation shall be reported in the bi-weekly monitoring report submitted to DPS and DEC; (ii) during post-construction monitoring, the environmental contractor shall be responsible for recording all such observations and the observation shall be reported as required in the post-construction monitoring and adaptive management plan; and (iii) if a threatened or endangered avian species or avian species of special concern is demonstrating breeding behavior, the onsite environmental monitors or environmental contractor shall report the observation to the regional DEC Natural Resources Supervisor and the DEC Central Office Project Manager within twenty-four (24) hours;

c) Operation and Maintenance (O&M): During O&M, the Certificate Holder shall be responsible for training O&M staff to focus on successfully identifying the following bird species and bat species: bald eagle (*Haliaeetus leucocephalus*), golden eagle (*Aquila chrysaetos*), short-eared owl (*Asio flammeus*), northern harrier (*Circus hudsonius*), Henslow's sparrow *Centronyx henslowii*); Upland Sandpiper (*Bartramia longicauda*) and Northern Long Eared Bats (Myotis septentrionalis);

d) Reporting Requirements: all reports of threatened and endangered species and species of special concern shall include the following information: species; number of individuals; age and sex of individuals (if known); observation date(s) and time(s); GPS coordinates of each individual observed (if operations and maintenance staff do not have GPS available the report should include the nearest turbine number and cross roads location); behavior(s) observed; identification and contact information of the observer(s); and the nature of and distance to any project construction, maintenance or restoration activity; and

e) any dead, injured or damaged federally or State-listed threatened and endangered species and species of special concern, or their parts, eggs, or nests are discovered within the Project Area (defined for the purpose of this condition as leased land or property parcels containing Project components) by the Certificate Holder, its designated agents, or a third party that notifies the Certificate Holder, the Certificate Holder shall immediately (within twenty-four [24] hours) contact the DEC Region 9 Natural Resource Supervisor and the DEC Central Office Project Manager (and United States Fish and Wildlife Service [USFWS], if federally listed species) to arrange for recovery and transfer of the specimen(s). The following information pertaining to the find shall be recorded: species; age and sex of the individual(s), if known; the date of discovery of the animal or nest; condition of the carcass, or state of the nest or live animal; the GPS coordinates of the location(s) of discovery; the name(s) and contact information of the person(s) involved with the incident(s) and find(s); weather conditions for the previous forty-eight (48) hours; photographs, including scale and of sufficient quality to allow for the later identification of the animal or nest; and, if known, an explanation of how the mortality/injury/damage occurred. Each record shall be kept with the container holding the specimen(s) and given to NYSDEC or USFWS at the time of transfer. If the discovery is followed by a non-business day, the Certificate Holder shall ensure all the information listed above is properly documented and of the animal or nest; and, if known, an explanation of how the mortality/injury/damage occurred. Each record shall be kept with the container holding the specimen(s) and given to NYSDEC or USFWS at the time of transfer. If the discovery is followed by a non-business day, the Certificate Holder shall ensure all the information listed above is properly documented and stored with the specimen(s). Unless otherwise directed by NYSDEC or USFWS, after all information has been collected in the

field, the specimen(s) will be placed in a freezer, or in a cooler on ice until transported to a freezer, until it can be retrieved by the proper authorities.

97. If at any time during construction and operation of the Facility a bald eagle nest is identified within the Facility site, the regional DEC Region 9 Natural Resource Supervisor and DPS Staff will be notified within twenty-four (24) hours of discovery or observation, and prior to any disturbance of the nest or immediate area around the nest, or area where bald eagles were seen exhibiting any breeding behavior. An area one quarter (1/4) mile in radius from the bald eagle nest tree shall be posted and avoided until notice to continue construction at that site is granted by DPS Staff, in consultation with the DEC Region 9 Natural Resource Supervisor. The nest(s) or nest tree(s) shall not be approached under any circumstances unless authorized by the DEC Region 9 Natural Resource Supervisor.

Wetlands and Streams, Vegetation, and Invasive Species

98. Equipment and machinery storage, refueling, maintenance, and repair shall be conducted and safely contained more than 100 feet from wetlands and waterbodies to the maximum extent practicable. The Certificate Holder shall perform all construction, operation and maintenance in a manner that avoids then minimizes adverse impacts to waterbodies, wetlands, and the one hundred (100) foot adjacent areas associated with all Article 24-regulated and jurisdictional wetlands.

99. Fuel or other chemical storage containers shall be located at least 300 feet from wetlands and waterbodies.

100. All mobile equipment, excluding dewatering pumps, must be fueled, repaired, or maintained in a location at least 100 feet from wetlands and waterbodies, to the maximum extent practicable, unless moving the equipment will cause additional environmental impact. Dewatering pumps operated closer than 100 feet from the stream bank, wetland, or waterbody, must be within a secondary containment large enough to hold the pump and accommodate refueling.

101. Spillage of fuels, waste oils, other petroleum products or hazardous materials shall be reported to DEC's Spill Hotline (1-800-457-7362) within two hours, in accordance with the DEC Spill Reporting and Initial Notification Requirements Technical Field Guidance. DPS Staff shall also be notified of all reported spills.

102. All fill shall consist of clean soil, sand and/or gravel that is free of the following substances: asphalt, slag, fly ash, broken concrete, demolition debris, garbage, household refuse, tires, woody materials including tree or landscape debris, and metal objects. Reasonable efforts will be made use fill materials that are visually free of invasive species.

103. Turbid water resulting from dewatering operations shall not be allowed to enter any wetland, stream or water body. Water resulting from dewatering operations shall be discharged directly to settling basins, filter bags, or other approved device. All necessary measures shall be implemented to prevent any substantial visible contrast due to turbidity or sedimentation downstream of the work site. Waters accumulated in the isolated work area shall be discharged to an upland settling basin, field or wooded area to provide for settling and filtering of solids and sediments before water is returned to the stream. Return waters shall be as clear as the flowing water upstream from the work area. Temporary dewatering structures (i.e., cofferdams, diversion pipes, etc.) and associated fill shall be completely removed, and the disturbed area shall be regraded and restored immediately following the completion of work. All excess materials shall be completely removed to upland areas more than 100 feet from wetlands and waterbodies

and shall be suitably stabilized.

104. All disturbed and temporary impacts resulting from project activities within Federal and NYS-regulated and jurisdictional wetlands and NYS-regulated adjacent areas shall be returned to pre-disturbance conditions or crops consistent with existing agricultural uses. All disturbed soils within protected wetlands and the associated adjacent areas must be seeded with a native seed mix, except within active cropland where it would be acceptable to seed with crops consistent with existing agricultural uses. Mulch shall be maintained until the disturbed area is permanently stabilized. Additional seeding shall be completed as necessary to achieve an 80% vegetative cover across all disturbed areas.

104A. In the event that construction results in an alteration to (i.e. lowering) wetland hydrology then the breach shall be immediately sealed, and no further activity shall take place until DPS and NYSDEC staff are notified and a remediation plan to restore the wetland and prevent future dewatering of the wetland has been approved by DPS and NYSDEC.

105. Restoration of Federal and NYS-regulated and jurisdictional wetlands and NYS-regulated adjacent areas to pre-construction contours must be completed within 48 hours of final backfilling of the trench.

a) Immediately upon completion of grading, the area shall be seeded with an appropriate species mix.

b) Restored areas shall be monitored for a minimum of 3 years. Monitoring shall continue until an 80% cover of appropriate species has been reestablished over all portions of the replanted area, unless the invasive species baseline survey indicates a smaller percentage of appropriate species exists prior to construction.

106. Cut vegetation in wetlands may be left in place (i.e., drop and lop or piled in dry or seasonally saturated portions of freshwater wetlands and 100-foot adjacent areas to create wildlife brush piles) in accordance with Attachment A: 12. Wetland and Stream Package and 30. Limited Notice to Proceed (LNTP) – Clearing Package.

107. Installation of underground collection lines in NYS-regulated and jurisdictional wetlands shall be performed via Horizontal Directional Drilling (HDD) or using the following methods:

a) Topsoil shall be segregated from subsoil and temporarily placed onto a geotextile blanket.

b) The Certificate Holder shall implement best management practices to minimize soil compaction.

c) The length of the trench exposed shall not exceed 1,500 feet in a wetland to the maximum extent practicable.

d) All reasonable efforts shall be made to backfill open trenches within the same work day.

e) All excess materials shall be completely removed from wetlands to upland areas more than 100 feet from State wetlands and suitably stabilized.

107A. To the extent practicable, buried utilities (e.g., collection lines) shall be installed using trenchless methods when traversing wetland and waterbodies. If a trenchless installation method is not practicable, other crossing methods such as open cut or direct burial may be utilized provided that a site-specific plan for each underground or aboveground utility crossing of a protected wetland is prepared in consultation with DEC and DPS staff. The site-specific utility crossing plan shall include the following:

a) A site-specific assessment of constructability for all crossings that cannot use trenchless methods. The assessment shall be conducted by a professional engineer licensed in New York State and shall include a detailed analysis of the site-specific conditions that lead to the conclusion that all trenchless crossing methods are not constructible or not feasible at the particular wetland crossing;

b) Specific plans with the alignment for each wetland crossing and the extent of clearing and ground disturbance;

c) Proposed location of temporary access roads; and

d) Description of methods used to minimize soil compaction.

The following conditions shall apply to buried utilities that are installed via open cut or direct burial:

a) Excavation, installation, and backfilling must be done in one continuous operation.

b) Work within wetlands shall be conducted during dry conditions without standing water or when the ground is frozen, where practicable.

c) The length of the trench to be opened shall not exceed the length that can be completed in one day. This length of trench generally should not exceed 1,500 feet in a wetland.

d) Before trenching occurs, upland sections of the trench shall be backfilled or plugged to prevent drainage of turbid trench water from entering wetlands or waterbodies.

e) Trench breakers/plugs shall be used at the edges of wetlands and waterbodies as needed to prevent wetland draining during construction.

f) Only excavated wetland topsoil and subsoil shall be utilized as backfill.

g) Wetland topsoil shall be removed and stored separately from wetland subsoil and temporarily placed onto a geo-textile blankets.

h) When backfilling occurs in wetlands, the subsoil shall be replaced as needed, and then covered with the topsoil, such that the restored topsoil is the same depth as prior to disturbance

i) Following installation of buried utilities, protected wetlands and regulated adjacent areas shall be stabilized within 48 hours of final backfilling of the trench and restored to pre-construction contours as soon as practicable, but no later than 14 days of final backfilling. Immediately upon completion of grading, and as consistent with existing land uses, the area shall be seeded with a seed mix of native plants that is appropriate for wetlands and upland areas adjacent to wetlands.

j) Overall vegetative cover in restored areas shall be monitored for a minimum of 5 years or until an 80% cover of plants with the appropriate wetland indicator status has been reestablished over all portions of the restored area. Invasive species growth in the restored areas shall be monitored for a minimum of 5 years. The proportion of invasive species in the protected wetlands and regulated adjacent areas cannot exceed the proportion that existed immediately prior to the start of construction as described in the baseline invasive species survey. If, after one complete growing season, the 80% cover requirement has not been established or the proportion of invasive species

has increased, the Certificate Holder shall consult with DEC and DPS staff and prepare a Wetland Planting Remedial Plan (WPRP).

108. Installation of access roads through Federal and NYS-regulated and jurisdictional wetlands shall be performed using the methods in accordance with Attachment A Package 12. Wetland and Stream Package.

a) Temporary access roads shall use timber matting;

b) Permanent access roads shall use a layer of geotextile fabric and at least six inches of gravel shall be placed in the location of the wetland crossing after vegetation and topsoil is removed.

109. To control the spread of invasive insects, the Certificate Holder shall provide training for clearing and construction crews to identify the Spotted Lanternfly, Asian Longhorned Beetle and the Emerald Ash Borer and other invasive insects of concern as a potential problem at the project site. If these insects are found, they must be reported to the DEC regional forester as soon as practicable.

110. Concrete washouts and batch plants shall be located and installed to minimize impacts to water resources. Locations should be at least 100 feet from any wetland, waterbody and agricultural field, to the maximum extent practicable.

111. In-stream work shall only occur during times of no flow or when the stream is bypassed to allow work in the dewatered section of the stream. The Certificate Holder shall conduct all work in streams in dry conditions, using appropriate water handling measures to isolate work areas and direct stream flow around the work area (e.g., sandbags, cofferdam, piping or pumping around the work area). All in-stream work is prohibited from October 1 through May 31 in cold water fisheries, and from March 1 through July 31 in warm water fisheries, unless the Applicant receives prior approval from the DEC Region 9 Natural Resources Supervisor.

112. For any NYSDEC-protected stream impacted as part of construction, the restored stream channel shall be equal in width, depth, gradient, length and character to the pre-existing stream channel and tie in smoothly to profile of the stream channel upstream and downstream of the project area. The planform of any stream shall not be changed. All disturbed stream banks below the normal high-water elevation must be graded no steeper than 1 vertical to 2 horizontal slope, or to the original grade as appropriate, and adequately stabilized. All disturbed stream banks shall be mulched within (2) days of final grading, stabilized with 100% natural/biodegradable fiber matting, and seeded with an appropriate riparian seed mix. Destroyed bank vegetation shall be replaced with appropriate native shrubs, live stakes, and/or tree plantings as site conditions, as appropriate. All other areas of soil disturbance above the ordinary high-water elevation, or elsewhere, shall be stabilized with natural fiber matting, seeded with an appropriate perennial native conservation seed mix, and mulched with straw within two (2) days of final grading. Mulch shall be maintained until suitable vegetation cover is established.

113. Trees shall not be felled into any Federal or State-protected stream.

114. The Certificate Holder shall be responsible for checking all culverts and assuring that they are not crushed or blocked during construction and restoration of the Project. If a culvert is blocked or crushed, or otherwise damaged, the Certificate Holder shall repair the culvert or replace it with alternative measures appropriate to maintaining proper drainage.

115. The creation, modification or improvement of any permanent road crossing of a Federal or State-protected stream must meet all Federal and NYS regulatory and permitted requirements and general conditions, specifically under §404 of the Clean Water Act and Articles 15 and 24 of NYS Environmental Conservation Law. Bridges that span the stream bed and banks should be utilized where practicable. If a bridge is not practicable, an alternative analysis shall be provided, including written justification for why a bridge is not practicable. If a culvert is the only practicable option, it shall be designed as follows:

a) a) New culvert pipes that the Certificate Holder is required to install shall be designed to safely pass the 1% annual (100-year return) chance storm event;

b) Culvert pipes must be embedded beneath the existing grade of the stream channel;

c) Width of the structure must be a minimum of 1.25 times (1.25X) width of the mean high-water channel, as practicable;

d) The culvert slope shall remain consistent with the slope of the adjacent stream channel. For slopes greater than 3%, an open bottom culvert must be used; and

e) To contain native streambed substrate or equivalent using an open bottom arch, three-sided box culvert, or round/elliptical culvert with at least 20% of the culvert height embedded beneath the existing grade of the stream channel at the downstream invert; and

f) Shall facilitate downstream and upstream passage of aquatic organisms.

115A. For temporary stream crossings, the Certificate Holder shall utilize free span temporary equipment bridges or culverts designed to NYSDEC and/or US Army Corps of Engineers standards to cross all streams with flow at the time of the proposed crossing. All structures must be able to safely pass the 1% storm event and be capable of withstanding any higher flow intervals likely to be experienced within a specific waterbody without causing damage to the stream bed or banks. Bridges or culverts may not be dragged through the stream and must be suitably anchored to prevent downstream transport during a flood. Fill may not be placed within the stream channel below bank full elevation and placement of abutments or fill is authorized only above and outside bank full boundaries. Geotextile fabric must be placed below and extending onto the bank and suitable side rails built into the bridges to prevent sediment from entering the waterbody.

116. Horizontal Directional Drilling (HDD) shall be performed in accordance with the approved HDD Frac-Out Plan. To minimize risk to aquatic species in the event of a frac-out, drilling fluids shall be biodegradable.

117. During periods of work activity, flow immediately downstream of the work site shall equal flow immediately upstream of the work site.

118. Any in-stream structures placed in a stream must not create a drop height greater than 6 inches.

VII. Facility Operation

119. The Certificate Holder shall operate the Facility in accordance with the Interconnection Agreement, approved tariffs and applicable rules and protocols of National Grid, NYISO, NYSRC, NPCC, NERC and successor organizations.

120. The Certificate Holder shall operate the Facility in full compliance with the applicable reliability criteria of National Grid, NYISO, NPCC, NYSRC, NERC and successors. If it fails to meet the reliability criteria at any time, the Certificate Holder shall notify the NYISO immediately, in accordance with NYISO requirements, and shall simultaneously provide the Board, or the Commission after the Board's jurisdiction has ceased, by filing with the Secretary and National Grid a copy of the NYISO notice.

121. The Certificate Holder shall obey unit commitment and dispatch instructions issued by NYISO, or its successor, in order to maintain the reliability of the transmission system. In the event that the NYISO System Operator encounters communication difficulties, the Certificate Holder shall obey dispatch instructions issued by the National Grid Control Center, or its successor, in order to maintain the reliability of the transmission system.

122. Good Utility Practices:

a) The Certificate Holder shall abide by Good Utility Practice, which shall include, but not be limited to, NERC, NPCC, NYSRC, and NYISO criteria, rules, guidelines and standards, including the rules, guidelines and criteria of any successor organization to the foregoing entities.

b) When applied to the Certificate Holder, the term Good Utility Practice shall also include standards applicable to an independent power producer connecting to the distribution or transmission facilities or system of a utility.

c) Except for periods during which the authorized facilities are unable to safely and reliably convey electrical energy to the New York transmission system (e.g., because of problems with the authorized facilities themselves or upstream electrical equipment), the Facility shall be exclusively connected to the New York transmission system via the facilities identified and authorized in these conditions.

123. The Certificate Holder shall work with National Grid engineers and safety personnel on testing and energizing equipment in the authorized interconnection switchyard and collection substation. If National Grid's testing protocol is not used, a testing protocol shall be developed and provided to National Grid for review and acceptance. The Certificate Holder shall file with the Secretary a copy of the final testing design protocol within 30 days of National Grid's acceptance.

124. The Certificate Holder shall notify DPS Staff of meetings related to the electrical interconnection of the project to the National Grid transmission system and provide the opportunity for DPS Staff to attend those meetings.

125. Transmission Related Incidents:

a) The Certificate Holder shall call the DPS Bulk Electric System Section within one hour to report any transmission related incident that affects the operation of the Facility.

b) The Certificate Holder shall file with the Secretary a report on any such incident within seven days and provide a copy of the report to National Grid. The report shall contain, when available, copies of applicable drawings, descriptions of the equipment involved, a description of the incident and a discussion of how future occurrences will be prevented.

c) The Certificate Holder shall work cooperatively with National Grid, NYISO, NYSRC, NERC and the NPCC to prevent any future occurrences.

126. If National Grid or the NYISO bring concerns to the Commission, the Certificate Holder shall be obligated to address those concerns and shall make any necessary modifications to its Interconnection Facility if the NYISO or National Grid find such facilities are causing, or have caused, reliability problems to the New York State Transmission System.

127. If, after completion of construction of the Facility, no electric power is generated and transferred out of such plant for a period of more than nine months, the Certificate Holder shall file with the Secretary a report explaining the reason(s) for the lack of power generation and describing plans to commence Facility operation. Upon receipt of the report, the Commission may consider advising the Siting Board that the amendment, revocation or suspension of the Certificate may be appropriate.

128. Facility Malfunction:

a) In the event that a malfunction of the Facility causes a significant reduction in the capability of such Facility to deliver power, the Certificate Holder shall promptly file with the Secretary and provide to National Grid copies of all notices, filings, and other substantive written communications with the NYISO as to such reduction, any plans for making repairs to remedy the reduction, and the schedule for any such repairs.

b) The Certificate Holder shall provide monthly reports to the Secretary and National Grid on the progress of any repairs.

c) If such equipment failure is not completely repaired within nine months of its occurrence, the Certificate Holder shall provide a detailed report to the Secretary, setting forth the progress on the repairs and indicating whether the repairs will be completed within one year of the date of failure. Wind turbines shall be decommissioned if they are non-operational for a period of one year and a day. However, if the Certificate Holder is expecting delays due to a part manufacturer or complications regarding the repair of non-operational turbine(s), it shall petition the Secretary for an extended amount of time if it is expected that certain turbine(s) will not be in operation for more than one year and a day. The petition shall include an explanation of the circumstance and an estimation of the amount of time it will take to repair the turbine(s) and shall demonstrate why the repairs should continue to be pursued.

129. In the event of a blade failure, fire or other catastrophic event involving a wind turbine and its associated equipment, the DPS Chief of Bulk Systems and the Towns shall be notified no later than 12 hours following such an event.

130. The Certificate Holder shall have an inspection program for the wind turbine blades and other turbine components. Reports shall be filed annually with the Secretary identifying any major damage, defects or any other problems with the wind turbine, or indicating that no such damage, defect or problem was found. The annual report shall summarize maintenance and inspection activities performed and include any photographs of the area in question, and the any major repairs undertaken.

VIII. Miscellaneous

Existing Oil and Gas Wells

131. The Certificate Holder shall conduct annual ground testing of all wind turbine ground grids that are within 600 feet of gas lines or gas wells. If the test results show that a repair is necessary, the Certificate Holder shall take all reasonable steps to address the situation.

132. Discovery of Oil Wells, Gas Wells, and/or Associated Pipelines: In the event previously unknown oil wells, gas wells, and/or associated pipelines are discovered during Project construction, the following procedures shall apply:

a) The Certificate Holder shall consult with the DPS Gas Safety Staff if gas lines are identified as soon as practicable, considering cell coverage and internet service availability in the field;

b) The Certificate Holder shall notify NYSDEC Region 7 Mineral Resources Supervisor of the discovery of any unplugged oil or gas well as soon as practicable considering cell coverage and internet service in the field. GPS coordinates for, and access to, the newly discovered well location shall be provided by the Certificate Holder to the NYSDEC Region 7 Mineral Resources Supervisor;

c) Immediately cease, or cause to cease, all activities and power down all power equipment at the location where the well or pipeline is encountered until NYSDEC and DPS authorize recommencement of construction activities;

d) Evaluate any emergency conditions and contact local emergency personnel if conditions warrant; and

e) The Certificate Holder shall report any non-routine incident such as fires, breaks, leaks or escapes from pipelines, oil and gas wells, tanks, or receiving and storage receptacles from which oil and gas production or products is escaping or has escaped that may affect the environment or the health, safety, welfare or property of any person as follows:

(i) Within two (2) hours of discovery of the non-routine incident, orally in person or by telephone to the NYSDEC Region 7 Minerals Resources Supervisor;

(ii) Within twenty-four (24) hours of discovery of the non-routine incident, in writing, to the same office using the NYSDEC Division of Mineral Resources' Non-Routine Incident Report (NRIR) form (available at: http://www.dec.ny.gov/energy/4761.html); and

(iii) The completed NRIR form must detail the non-routine incident, any corrective actions taken by the Certificate Holder and include, as necessary, a proposed Corrective Action Plan for NYSDEC review and acceptance. If the incident involves gas or oil wells discovered during construction, this Corrective Action Plan must include a plan for permanent plugging of the wells. Provided the environment or the health, safety, welfare or property of any person would not be further endangered, any action or condition known or suspected to cause or contribute to the non-routine incident must cease immediately upon discovery of the non-routine incident, and appropriate initial remedial actions must be commenced. The verbal and written non-routine incident reporting requirement does not replace or supersede any other required local, state and/or federal reporting requirements, including any required reporting to the NYSDEC Spill Hotline.

133. Site Access to Existing and Discovered Orphaned Wells: Access to existing wells or any previously unknown wells discovered during construction must be maintained until the well(s) are properly plugged and abandoned pursuant to NYCRR § 555.5 and NYSDEC's recommended practices outlined in the Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program or an alternative method acceptable to NYSDEC.

134. Setbacks must be sufficient to allow for a service rig and ancillary equipment to set up over a well to plug it. Permanent structures (including wind turbines) and buildings must have a minimum setback of 100 feet from oil and gas wells and there shall be sufficient space to construct an access road of at least 20 feet in width to oil and gas wells.

135. Unplugged orphan wells shall be plugged by the Certificate Holder if it occurs in an area of proposed excavation that cannot be adjusted due to site constraints. Unplugged orphan wells shall be plugged pursuant to 6 NYCRR § 555.5 and NYSDEC's recommended practices outlined in the Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program. In the event mechanical or other unusual conditions in the well make it impractical to follow the plugging sequence outlined in 6 NYCRR § 555.5, the Certificate Holder shall consult with NYSDEC to determine an alternative plugging procedure. Within 30 days of plugging any well, the Certificate Holder shall file a plugging report with NYSDEC pursuant to 6 NYCRR § 555.5(d) and on an approved form.

136. The Certificate Holder shall adjust ground intrusive construction activities at the site to avoid working within the limits of impacted material discovered during construction. If the limits of impacted material cannot be avoided, the Certificate Holder shall evaluate options for planning and implementing remediation activities. A Contamination and Reporting and Management Plan shall be submitted for approval as a compliance filing. The Contamination and Reporting and Management Plan shall address any petroleum-impacted soil, water (surface water or ground water) and bedrock (identified through staining, discoloration, odor, etc.) encountered during construction activities. The Contamination Reporting and Management Plan shall include the following procedures and conditions:

a) Upon discovery of petroleum-impacted materials, the Certificate Holder shall immediately suspend ground intrusive work in the vicinity of the observed contamination;

b) The Certificate Holder shall notify the New York State Spill Hotline (1-800-457-7362 inside NY or 518-457-7362 outside NY) within two hours of discovery in accordance with the Article 12 of the Navigation Law and 17 NYCRR §§ 32.3 and 32.4;

c) Emergency procedures to be followed by the Certificate Holder to contain released or discovered fluids and any petroleum-impacted material until appropriate emergency spill response services arrive, including:

(i) mitigating the release by utilizing and mobilizing personnel, equipment and materials to contain the release and prevent the release from impacting the lands and waters of the State;

(ii) a qualified spill cleanup contractor must be contacted in the event the spill cannot be readily addressed by personnel, equipment and materials on-site; and

d) Non-emergency procedures to be followed by the Certificate Holder in the event of a discovery of an old or small petroleum release where the release is not ongoing;

e) All impacted material shall be managed and transported in accordance with applicable laws and regulations, including, but not limited to, 6 NYCRR Part 360;

f) Construction equipment that comes in contact with the impacted material shall be washed (as necessary) to remove impacted material adhered to the tires, tracks, undercarriage, and other parts of vehicle exteriors. The wash water and solids from the decontamination activities shall be collected, contained, tested, removed from the site, and ultimately properly disposed of at a licensed and approved facility.;

g) Cleaning solutions and impacted materials shall be collected and transported by a waste hauler with a valid 6 NYCRR Part 364 Waste Transporter Permit to a permitted disposal facility

Attachment A

Description of Additional Required Filings

1. Site Plans

Compliance Filing. Must be approved before starting grading for the facilities shown on the plans.

Required contents:

a. WTG Site Plans. One map per wind turbine. Shows assembly area with crane pad and temporary laydown areas. Prepared on GIS or CAD, with aerial background. 11x17 sheets or larger. Plans shall indicate blade installation procedure to be used for each turbine.

b. Access Roads Plans. Plan and profile drawings done with CAD. Typical cross section. Plans should show final road widths and expected grading limits during construction.

c. Temporary Facility Plans. Unless previously approved, site plans for the construction laydown yard and batch plant, if any, showing grading limits, exterior lighting, driveways, and applicable local setbacks. Construction laydown yard plan shall also show planned areas for trailers, parking, and storage. Batch plant plan shall also show planned areas for parking, material stockpiles, conveyors, mixer(s), water supply, flush systems with arrows showing direction of drainage system flow (to proposed catchment pits, etc., and truck loading.

WTG and access road site plans will be drawn at a scale of 1"=200' or smaller. All site plans will show:

i. pre-construction topographic contours, if Certificate Holder determines that these can be shown without obscuring other required information,

ii. locations of known archaeological sites within 100 feet of the planned limits of disturbance,

iii. locations of buried utilities based on ALTA surveys,

iv. crossing methods for any areas where Project access roads or electric lines cross a stream or wetland,

v. planned locations where new fences or gates will be installed,

vi. agricultural classification and protection measures, or cross-reference to a map in the Agricultural package.

2. Electrical Collection System (ECS) Package

Compliance Filing. Must be approved before starting ECS cable installation.

Required contents:

a. Plans showing routes of individual ECS circuits, including identification of any areas where overhead circuits are planned.

b. For underground circuits, schedule of cable sizes, typical cross section drawing(s), planned circuit spacing for right-of-ways with multiple circuits, junction boxes, and a list of locations to be installed with horizontal directional drilling (HDD), and a typical crossing detail.

c. Frac-out Plan, describing contingency plans to be implemented in the case of a leak of drilling fluid during horizontal directional drilling.

d. For overhead circuits (if any), structure drawings, plan and profile drawings, specification of conductor types.

3. Collection Substation Package

Compliance Filing. Must be approved before starting grading at Collection Substation site.

Required contents:

a. One-line drawing,

b. General arrangement (site plan),

c. Plan and profile drawings,

d. Site plan showing fences and driveways.

4. [Transmission Line Package – Not Applicable for Alle-Catt Wind due to Article VII]

5. Foundation Design Package

Compliance Filing. Must be approved before pouring concrete for any WTG foundations.

Required contents:

a. Geotech report, including (i) verification if subsurface conditions for every site where a wind turbine will be built; (ii) identification of turbine sites with karst features, highly corrosive soils, high frost risk, high shrink/swell potential, and where blasting is likely to be required; (iii) characterization of subsurface conditions at sites where HDD is planned; and (iv) if karst features are deemed to be likely at the site, recommendations on mitigation measures including any proposed limits on blasting to address risk from karst features.

b. Turbine foundation design drawings, with plan and elevation views, stamped by New York-licensed PE, for every type of foundation to be used. Applicable criteria regarding foundation design shall be listed and described in the foundation drawings and details;

c. List of foundation type and elevation for each WTG site in tabular format.

6. Wind Turbine Information Package

Information Report. Must be filed before pouring concrete for any WTG foundation, except that item (a) must be filed prior to the commercial operation date.

Required contents:

a. Design verification, verifying that the wind turbines were designed in accordance with International Electrotechnical Commission (IEC) 61400.

b. Site-suitability analysis, completed by a third-party and demonstrating that the selected wind turbine model(s) are suitable for the site conditions. A mechanical load analysis by the wind turbine vendor to determine applicability of the warranties is an appropriate analysis for this purpose. An analysis by an independent engineer evaluating the technical risks of the project for potential investors shall also serve this purpose.

c. Weights and dimensions,

d. Blade installation method, a general description is sufficient,

Information to be standard information available to developers purchasing equipment from the manufacturer.

7. Land Rights Package

Information Report. Items a and b(i) must be filed before starting clearing at the Facility Site; item b(ii) must be filed before WTG foundation may be poured, and item b(iii) must be filed before the Commercial Operation Date.

Required contents:

a. Map of survey of Facility Site properties with property lines based on meets and bounds survey,

b. Notarized memos or similar proof of agreement for every (i) Facility Site property, (ii) any properties outside of the Facility Site whose owner has agreed to allow wind turbines to be located closer to their boundary than allowed by local law ("Setback Properties"), and (iii) any other property whose owner has signed a participation agreement or other type of agreement including a waiver of noise or shadow impacts.

8. Stormwater Package

Compliance Filing. Must be approved before grading at the Facility Site.

Required contents:

a. Cross-reference to approved stormwater pollution prevention plan (SWPPP) provided in the information report in the State Permit Package (Section 21.a).

b. Additional erosion and sedimentation (E&S) drawings beyond those included in the SWPPP, if required, showing final topographic lines, boundaries of delineated wetlands, areas of cut and fill, locations of temporary E&S control measures, locations of permanent erosion and sedimentation control measures, sizes and locations of culverts.

c. Typical details for E&S measures, including trench breakers for construction of underground facilities perpendicular to steep slopes and specifications on selecting locations for concrete washouts.

9. Noise Package

Refer to Certificate Conditions on Noise and Vibration.

10. Shadows Package

Compliance Filing. Must be approved before start of construction.

Required contents:

a. Expected annual shadow hours, a list of expected annual shadows from Project operation at all residences within 10 times the rotor diameter of planned wind turbines (Shadow Receptors),

calculated for a project configuration that can be reasonably be assumed to bound shadows from the as-built configuration.

b. Plans the Certificate Holder will use to comply with conditions requiring, in certain situations, to mitigate shadows or limit actual annual or daily shadow hours by means of shadow monitoring technology to track actual annual or daily hours and curtail wind turbine operation.

11. FAA and Exterior Lighting Package

Compliance Filing. Must be approved before installation of exterior lighting.

Required contents: Locations (fixture type and heights and elevations) and manufacturers cut sheets, for all exterior lights to be installed as part of the project, including those to be installed at:

a. on wind turbines in compliance with FAA requirements (including any information on aircraft detection systems that may be integrated with the FAA lights),

b. near WTG entry doors,

c. at the O&M building,

d. at any exterior storage yards, whether located at the O&M Building site or elsewhere, and

e. the Collection Substation.

12. Wetlands and Stream Package

Compliance Filing. Must be approved before start of grading activities in wetland areas or streams.

Required contents:

a. Wetland and stream drawings, showing areas where roads, electric collection lines, or transmission lines that cross wetlands and/or streams, shall indicate topographic contours, delineated wetlands and streams, specifying access and construction measures, crossing method (e.g., culvert or bridge; trenchless or trenched installation, timber matting or geotextile/grave, etc.); and any designated streamside "protective or buffer zones" in which construction activities will be restricted. 1"=50' scale.

b. The Certificate Holder shall, in consultation and coordination with DEC Staff and DPS Staff, provide further analysis together with a field assessment of unmapped ECL Article 24 jurisdictional wetlands PUM1 and PUM6 and determine the proper classification of wetlands PUM1 and PUM 6.

c. Tables listing wetland and stream impacts, with the following for each impact: area, type of wetland or stream classification, type of impact, jurisdiction.

d. The Certificate Holder shall work with DEC to develop a Wetland Mitigation Plan in accordance with all Federal and State Laws and regulations and shall submit the Wetland Mitigation Plan for DEC acceptance within six months prior to the start of construction. If mitigation for impacts to federally regulated wetlands is provided through an approved in-lieu fee program, a final letter of credit availability from an approved wetland mitigation bank, along with document of payment, will be provided, pursuant to 16 NYCRR § 1002.4. At a minimum, the Wetland Mitigation Plan shall include the following:

i. The creation of compensatory wetlands at a ratio that is consistent with state and federal regulations;

ii. The establishment of forested wetlands within currently non-forested wetlands to serve as compensation for conversions of forested to non-forested wetlands within the limits of disturbance;

iii. Mitigation measures designed to compensate for Project impacts to regulated 100-foot adjacent areas within the limits of disturbance;

iv. Project construction timeline;

v. Construction details for meeting all requirements contained in these proposed certificate conditions;

vi. Performance standards that meet state and federal requirements for determining wetland mitigation success;

vii. Specifications for post construction monitoring for at least 5 years after completion of the wetland mitigation;

viii. After each monitoring period the Certificate Holder shall take corrective action for any areas that do not meet the above referenced performance standards to increase the likelihood of meeting the performance standards after 5 years; and

ix. If, after 5 years, monitoring demonstrates that the wetland mitigation is still not meeting the established performance standards, the Certificate Holder must submit a "Wetland Mitigation Remedial Plan". The remedial plan must evaluate the likely reasons for not achieving performance standards, describe the actions necessary to correct the situation to ensure a successful mitigation, and the schedule for conducting the remedial work. Once approved, the "Wetland Mitigation Remedial Plan" will be implemented according to an approved schedule.

e Map(s) showing where HDD is planned for installation of buried cables under wetlands or streams.

f. An Inadvertent Return Plan showing all locations where horizontal directional drilling (HDD) is proposed. The plan shall assess potential impacts from frac-outs, establish measures for minimizing the risk of adverse impacts to nearby environmental resources, and require the following:

i. Prior to conducting HDD, Material Safety Data Sheets (SDS) will be provided to DPS and DEC staff;

ii. Drilling fluid circulation shall be maintained to the extent practical;

iii. If inadvertent returns occur in upland areas, the fluids shall be immediately contained and collected;

iv. If the amount of drilling fluids released is not enough to allow practical collection, the affected area will be diluted with freshwater and allowed to dry and dissipate naturally;

v. If the amount of surface return exceeds that which can be collected using small pumps, drilling operations shall be suspended until surface volumes can be brought under control;

vi. If inadvertent drilling fluids surface returns occur in an environmentally sensitive area (i.e. wetlands and water bodies) the returns shall be monitored and documented;

vii. Drilling operations must be suspended if the surface returns pose a threat to the resource or to public health and safety;

viii. Removal of released fluids from environmentally sensitive areas will take place only if the removal does not cause additional adverse impacts to the resource based on the professional judgment of the environmental monitor/inspector. Prior to the removal of fluids from environmentally sensitive areas, DPS and DEC staff will be notified and consulted;

ix. If inadvertent drilling fluids surface returns occur in an environmentally sensitive area DPS and DEC Staff shall be notified immediately and a monitoring report summarizing the location of surface returns, estimated quantity of fluid and summary of cleanup efforts shall be submitted within 48 hours of the occurrence;

x. The plan shall establish protocols for recovery of inadvertent releases, handing and disposal.

13. O&M Building Package

Compliance Filing. Site plan and architectural drawings must be approved before pouring O&M building foundation. Required contents:

a. Site Plans, including local zoning designation of the site, lines showing setback requirements of local laws, planned locations for building(s), fence(s), parking, driveway(s), and septic system(s).

b. Architectural drawings (to scale), including plan and elevation views of the building.

c. Cross-reference to lighting plan and other packages containing specific information relevant to the O&M building.

14. Buried Utilities Package

Compliance Filing. Must be approved before excavating (including grading or moving of soil) in or within five (5) feet of the right-of-way for any buried high-pressure gas pipeline or other buried utility (including related above-ground facilities) with an easement right-of-way (Buried Utilities).

Required contents:

a. List of locations indicating (i) where temporary or permanent access roads are proposed above existing utilities; and (ii) where proposed facilities are planned to cross or enter the right of way of existing utilities. The list shall identify the utility type, utility owner, type of crossing, and reference to maps showing crossing details.

b. Map of crossing locations. Map shall show Facility Site, Facility Components, routes and owners of existing gas pipelines, locations of crossings, reference to crossing detail figures.

c. Crossing Detail Drawings. One for each crossing location (including proposed components and construction equipment crossings), each showing centerline of existing utility based on best available information, boundaries of the right-of-way, and planned Facility Components or construction vehicle crossing structures. Each figure shall be on aerial photograph background and have a minimum scale of 1"=200' and details shall be provided of any construction vehicle crossing structures.

d. Available information on cathodic protection systems, if any, on the underground utilities being crossed and potential impacts of the crossing on that system,

e. Contact information for utility company field representatives and plans for in-the-field coordination between Certificate Holder and utility company during Facility construction.

f. Copies of any agreements entered with the owners/operators of existing high-pressure gas pipelines regarding the protection of those facilities. The Certificate Holder shall contact all known operators of high-pressure gas pipelines in the Facility Site and shall work with each operator to ensure the Facility's electrical collection system will not damage the operators' pipelines or related cathodic protection systems.

15. Water Wells Package

Information report. Must be filed before or within 5 days of the Commencement of Construction.

Required contents:

a. A statement confirming that no Facility wind turbine will be located and no pesticides will be used within 100 feet of an active water supply well or a water supply intake for a municipal water system.

b. Maps showing the locations of, and a statement confirming that the Certificate Holder offered pre- and post-construction potability testing for, the following drinking water facilities:

1. all existing and active drinking water wells within 100 feet of collection lines, transmission lines and access roads; and

2. all existing and active drinking water wells on non-participating parcels within 1,000 feet of turbine locations.

c. Identification of the wells for which the Certificate Holder has performed, or agreed to perform, pre- and post-construction water well testing.

d. The identity and qualifications of the third-party that will perform pre- and post-construction well testing. A list of the parameters, developed in consultation with DPS Staff, for which testing will be performed to compare pre- and post-construction potability of drinking water at well locations.

16. Roads and Equipment Delivery Package

Information report. Must be filed before or within 5 days of the start of wind turbine component deliveries.

Required contents:

a. Delivery route maps, showing routes on New York state, county, and town roads to be followed for oversize or overweight vehicles delivering wind turbine components to the Facility Site (WTG Deliveries). These route maps shall also identify any weight-limited bridges along the route that are to be avoided.

b. Road Modification Plans, showing modifications to New York state, county, and town roads planned to accommodate the WTG Deliveries.

c. Points of contact for NYS DOT, NYS Police Barracks, and county highway departments that can verify their department's awareness of the plans for WTG Deliveries.

d. Road use agreements between CWE and towns or counties.

17. Construction Management Package

Compliance Filing. Must be approved before start of construction. Portions of plans that present contact information shall be considered information reports.

Required contents:

a. QA/QC Plan

b. Construction Notification Plan, describing all pre-construction notifications that will be disseminated in accordance with the requirements of Certificate Condition 20.

c. Project Communications Plan, describing the Certificate Holder's construction organizational structure, names and contact information for all individuals responsible for Project oversight, and

protocol for communication between parties. The individuals identified shall include those serving as the environmental monitor, construction supervisor, and agricultural inspector.

d. Environmental Monitoring Plan, including names and qualifications of companies that will serve as environmental monitors. Requirements from federal, state, and local permits will be attached as an appendix to this plan as information reports.

e. Traffic control plans.

f. Cross-reference to the Spill Prevention, Containment, and Countermeasures (SPCC) Plan, describing procedures to minimize the potential for unintended releases, that is contained in the SWPPP.

g. Concrete Requirements Plan, specifying the ACI and/or other standards with which batch plant or redi-mix concrete will be required to comply, plans for monitoring and testing to ensure the applicable standards are met.

h. Dust Control Plan, specifying measures to be used to minimize fugitive dust and airborne debris from construction activity.

i. Emergency Response Plan, with contacts for Project construction.

j. Demolition plan, identifying any buildings to be demolished, if any, or moved and plans for containment of dust and disposal of waste materials.

k. Contamination and Reporting and Management Plan

l. Blast Monitoring Plan

18. Agricultural Package

Compliance Filing. Must be approved before grading in any field in active agricultural use.

Required contents:

a. Signed statement from Certificate Holder's main civil contractor acknowledging requirements to comply with NYS Department of Agriculture and Markets Guidelines on construction of windpower facilities in active agricultural lands.

b. Mapping of agricultural uses in the Facility Site, including shading or other codes to indicate (i) fields known to be in active agriculture use, (ii) areas of special agriculture operations (sugar bush, grapes, orchards, etc.), and (iii) fields known to contain drain tiles, buried water lines, or other special agricultural facilities.

19. SHPO Package

Information Report(s). Must be filed prior to start of construction.

Required contents:

a. A statement by SHPO confirming that the pre-construction cultural resource surveys provide acceptable coverage of the expected limits of disturbance.

b. Unanticipated Discovery Plan, approved by the SHPO and establishing procedures in the event resources of cultural, historical, or archaeological importance are encountered during construction.

c. Cultural Resources Mitigation and Offset Plan approved by SHPO.

20. Federal Permits

Information Report(s). Must be filed within 14 days of receipt. For each permit, provide cross-reference to relevant packages that have been previously filed.

Required contents:

a. US Army Corps of Engineers wetlands permit, with a wetland mitigation plan, if any.

b. FAA determinations of no hazard to air navigation and proof of Notices of actual construction.

c. US Fish and Wildlife Service Permits, if any

21. State Permits

Information Report(s). Must be filed within 14 days of receipt. Only required if not issued with the Certificate. For each permit, provide cross-reference to relevant packages that have been previously filed.

Required contents:

a. Acknowledgement of coverage under General Stormwater permit and a copy of the approved SWPPP.

b. NYSDOT permits required for oversize or overweight vehicles;

c. NYSDOT highway work permits and use/occupancy permits for intersection modifications, access road driveways, buried cable crossings, or overhead electric crossings.

22. Local Permits

Information Report(s). Must be filed within 14 days of receipt. For each permit, provide cross-reference to relevant packages that have been previously filed.

Required contents:

a. Building permits, if any.

b. Driveway / access road entrance permits, if any.

23. NYISO Package

Information Report(s). Must be filed within 14 days of receipt.

Required contents:

a. Interconnection Agreement

b. Facility Study

24. Environmental Package – Operation

Compliance Filing. Must be developed in consultation with DEC and DPS Staff, and approved before COD.

Required contents:

a. If deemed to be required by the Siting Board, Net Conservation Benefit Plans for Listed Species, including a demonstration that the plan results in a net positive benefit on applicable species containing, at minimum, the contents described in Certificate Conditions 62, 63 and 64.

b. Post-Construction Bird and Bat Monitoring and Adaptive Management Plan, based in part on DEC's June 2016 *Guidelines for Conducting Bird and Bat Studies at Commercial Wind Energy Projects*, acceptable to DEC (or in the absence of DEC concurrence, submitted to the Siting Board or PSC for resolution of matters in dispute), which shall include direct impact fatality studies, habituation/avoidance studies, breeding bird surveys and identify the types of studies to be performed, the number of years that they will be performed, and details such as the start date, number and frequency of turbine searches, search areas, bat, bald eagle and grassland bird monitoring, duration and scope of monitoring, methods for observational surveys, and reporting requirements.

25. Operations Package

Compliance Filing. Must be approved before COD. Portions of plans that present contact information shall be considered information reports.

Required contents:

a. Operations and Maintenance Plan.

b. Decommissioning Plan, including proof of required security, or plans to have security in place by the date required in the plan.

c. Emergency Response Plan, with contacts for Project operation

d. Complaint Resolution Plan, with procedures applicable to project operation

e. Site Security Plan for Facility Operation

f. Facility and Corridors Vegetation Management Plan, specifying plans for managing vegetation along any overhead transmission facilities, and corridors with buried cables and/or access roads, around wind turbine sites, at the O&M building, and at the Collection Substation. The plan shall discuss inspection and target treatment schedules, use of herbicides, and landowner notifications.

26. As-Built Package

Information Report. Must be filed within six months of COD.

Required Contents:

a. GIS shape files for as-built locations of wind turbine centers, meteorological tower centers, transmission line pole locations and permanent right of way, ECS circuits, access road edge lines, Collection Substation fence and final grading, POI Switchyard fence and final grading, and O&M building location and final grading.

b. Prints of maps showing information in the GIS shape files and names of access roads.

c. Signed statement that ECS system was installed in accordance with design specifications.

d. As-Built Plans and details for locations where access roads or ECS circuits cross or are co-located with high pressure natural gas pipelines, if any, showing location, cover, separation distances, and any protection measures installed.

27. Economic Benefits Report

Information Report. Must be filed within the earlier of (i) 42 months from COD or (ii) filing of an economic benefits report filed to NYSERDA.

Required contents: Copy of a NYSERDA report verifying the Project's economic benefits to New York or a similar report documenting the following:

a. Project payments for local taxes, PILOT agreements, and host community agreements;

b. Direct construction jobs and spending with companies based in New York and specifically in Steuben County;

c. Direct permanent jobs created as a result of the Project.

28. Setbacks and GIS Package

Compliance filing. Must be approved before Commencement of Construction.

Required contents:

a. Setback map, generated with GIS, and showing parcel boundaries, parcel ID's, parcel participation status, WTG center points, and setback circles around each WTG. This map shall also show locations of any of the following items within 1.5 times the wind turbine tip height: residences and other buildings regularly or occasionally occupied by people, public roads railways, airfields, major telecommunication towers, oil or gas wells, gas pipelines, oil pipelines, gas compressor and regulating stations.

b. GIS shape files for wind turbine centers, meteorological tower centers, overhead collection lines (if any), ECS circuits, access road centerlines, limits of disturbance, forest areas to be cleared, Collection Substation location, concrete batch plant (if applicable), construction laydown yard, and O&M building location.

GIS files shall be submitted as confidential information for use by state agencies.

29. Visual Impact Mitigation Package

Compliance filing. Must be approved within one year of COD.

Required contents: maps, descriptions, and schedule for visual impact mitigation features, such as earthwork or plantings, if any, to be installed by the Certificate Holder to mitigate visual impacts of the Facility.

30. LNTP (Limited Notice to Proceed) – Clearing Package

Compliance Filing. Must be approved before start of clearing activities. Note: approval of this package does not authorize stump removal and grading activities.

Required contents:

a. Maps or site plans showing the limits of disturbance (LOD), forested areas to be cleared, forested wetlands inside the LOD, unforested wetlands inside the LOD, roost trees or other trees to be protected from clearing activities, clearing methods, planned access routes, including matting for heavy equipment where applicable, and agricultural classification and protection measures, or cross reference to map in Agriculture package. The maps or site plans will be drawn at a scale of 1"=200' and will depict the planned location of project infrastructure associated with the clearing for

reference. The site plans in Compliance Filing Packages 1-3 and 13 will provide the project infrastructure locations for Siting Board approval.

b. Descriptions of clearing and stump treatment methods to be used in forested areas and forested wetlands,

c. Description of planned methods for vegetation disposal,

d. Description of methods to protect select trees, if any,

e. Complaint Resolution Plan, with procedures applicable to overall project construction.

f. Invasive Species Control Plan (ISCP), describing methods to be used to minimize the introduction and spread of invasive species.

g. Pre-construction mapping of invasive species, as required by ISMP section 4.

h. If temporary construction entrances are proposed, entrance details and grading, proof of filing of NOI for coverage under General Stormwater permit, a copy of the submitted SWPPP, and traffic control plans,

i. Land Rights package items a. and b.(i) for parcels where clearing is proposed, and related access to forest areas,

j. Plans for notification(s), preconstruction meeting, environmental monitoring, spill prevention methods to be employed by clearing contractors, including bulk storage if proposed, to be implemented during the scope of work authorized by this package. These may be more limited than the full plans required as part of other packages that must be approved prior to full construction activities.

31. LNTP (Limited Notice to Proceed) – Construction Laydown Yard Package

Compliance Filing. Must be approved before commencement of construction[1] of the laydown yard and O&M building if adjacent. Note: approval of this package does not authorize construction of permanent structures.

Required contents:

a. Site plan of the construction laydown yard, and traffic control plans (if proposing any activities that will disrupt local traffic),

b. Proof of filing of NOI for coverage under General Stormwater permit, including a copy of the submitted SWPPP,

c. Temporary lighting locations (fixture type and heights and elevations) and manufacturers cut sheets,

d. Land Rights package items a. and b.(i) for parcel(s) where the construction laydown yard is proposed,

e. Plans for environmental monitoring, spill prevention and invasive species management to be implemented during the scope of work authorized by this package. These may be more limited that than the full plans required as part of other packages that must be approved prior to full construction activities.

f. Cross-reference to the Complaint Management Plan and Invasive Species Management Plan submitted with the LNTP – Clearing Package.

[1] Commencement of Construction Activities - means the initial disturbance of soils associated with clearing, grading or excavation activities; or other construction related activities that disturb or expose soils such as demolition, stockpiling of fill material, and the initial installation of erosion and sediment control practices required in the SWPPP.

Notes for all packages:

1. Unless noted otherwise, approvals must be made by the Siting Board.

2. At Certificate Holder's option, it may meet the non-site plan mapping requirements by presenting the required information on either the site plans or maps.

APPENDIX B

SOUND TESTING COMPLIANCE PROTOCOL

ALLE-CATT WIND ENERGY PROJECT

CASE 17-F-0282

SOUND TESTING COMPLIANCE PROTOCOL

1) BACKGROUND. This Protocol applies to the certificate issued by the New York State Board on Electric Generation Siting and the Environment in Case 17-F-0282.

2) SOUND INSTRUMENTATION

a) Sound Level Meters (SLMs): All sound level measurements will be conducted using Type-1 integrating SLMs that meet the requirements of ANSI S1.43-1997(R 2007) “Specifications for Integrating-Averaging Sound Level Meters”. Where noted, Type-2 SLMs complying with ANSI/ASA S 1.4-1983(R 2006) or ANSI S1.43-1997(R 2007) can be used. Alternatively, sound level measurements will be conducted using Type-1 integrating SLMs that meet the requirements of ANSI/ASA S1.4-2014 / Part 1 / IEC 61672-1-2013.

b) One-Third Octave Band Analyzers: The instruments will have Class-1, One-third octave- band analyzers that meet ANSI S1.11-2004 (R2009) “Specification for Octave- Band and Fractional-Octave-Band Analog and Digital Filters”. Alternatively, the instruments will have Class-1, One-third octave-band analyzers that meet ANSI S1.11-2014/ Part 1 / IEC 61260-1: 2014.

c) Acoustical/field Calibrators (Sensitivity checkers): Any acoustical calibrator will be a Type-1 precision calibrator that meets the requirements of ANSI S1.40-2006 (R2011) “Specifications and Verification Procedures for Sound Calibrators”. Where noted, Type- 2 precision calibrators can be used.

d) Windscreens: The windscreens, when used, should be clean, dry, and in good condition. 7-inch diameter windscreens or equivalent will be used. Measured sound levels will be automatically corrected by the SLMs or manually corrected as relevant for the insertion loss caused by the windscreen. Insertion losses for windscreens will be documented and included as an appendix to the report as specified in section 14(b) of this protocol. 7” diameter wind foam screens should be used with secondary windscreens (e.g. 300 mm) to reduce the influence of wind noise.

e) Sound Floor: SLMs will have a sound floor or self-generated noise (combined – electrical and thermal - microphone and preamplifier noise) at least 5 dB below the sound pressure levels that are intended to be measured at each one-third frequency band of interest as specified in section 3(c) of this protocol. Alternatively, SLMs will have self-generated noise levels (Combined-electrical and thermal-microphone and preamplifier noise levels) lower than or equal to 22 decibels for broadband descriptors and lower than or equal to 10 decibels for all one-third frequency bands of interest. Sound floor characteristics should be documented with information from the manufacturer. When this is not available, sound floor characteristics may be documented with the most recent certificates of calibrations, provided the information was obtained and reported by an independent qualified laboratory. If

this information is also unavailable, sound floor may be estimated by measuring sound levels with the SLM running in a very quiet condition such as inside an SLM hard case or inside the calibrator with the calibration tone “off,” at an indoor quiet location such as inside a quiet room or a car turned off.

f) Dynamic range: The dynamic range of SLMs will be properly selected (manually or automatically) to avoid any noise floor and overload issues.

g) Temperature and Humidity: SLMs will have operating temperature and relative humidity ranges that comply with the standard listed in section 3(a) of this protocol and are expected to cover the estimated temperature and relative humidity conditions of the site during testing. When this is not possible, testing days and times with forecasted temperature and relative humidity values within the range of the SLMs may be selected. SLMs temperature and humidity ranges as reported by the manufacturer will be reported.

h) Tripods: SLMs will be mounted on tripods, stakes or poles. Operators, if present, will be as far as possible from the sound microphones during testing, at least 1.5 meters (5 feet) away.

3) NOISE DESCRIPTORS, WEIGHTING, RESPONSE, AND OTHER SETTINGS

a) Broadband Descriptors: The sound levels of the Leq, Lmax, L10, L90 and Lmin broadband descriptors at the residential positions shall be recorded and reported in 10 min. intervals.

b) One-Third Octave Band Descriptors: The Leq, Lmax, L10, L90 and Lmin noise descriptors shall also be recorded at selected residential positions for the One-Third Octave Bands of interest (as specified in section 3(c) of this protocol) and included in the sound compliance test report in 10 min. intervals.

c) Frequency Ranges of Interest: All one-third octave band measurements will include the frequencies from 12.5 Hz through 10,000 Hz. Any full octave band measurements will include the frequencies from 16 Hz through 8,000 Hz.

d) Weighting: Broadband sound levels shall be reported by using the A-weighting scale in the frequency range of interest. Full Octave Bands and One-third Octave Band levels shall be reported by using the Z, Linear or un-weighted scale.

e) Statistical Noise Descriptors Response: The response for determination of any statistical noise descriptors will be set to “Fast”.

f) Settings: All SLM settings will be reported.

4) CALIBRATION REQUIREMENTS

a) Laboratory Calibration: Each SLM and calibrator will have undergone laboratory calibration within two years prior to its use for any sound compliance test. Copies of the calibration certificates will be included as an appendix to the sound compliance test report.

b) Field Calibration: If operators are present, the SLMs will be acoustically calibrated (sensitivity check) in the field at a minimum immediately before the operational sound testing period, and before and after any background sound testing period, according to the procedures given in the SLM instruction manual. Otherwise, SLM's will be calibrated every time operators visit the measurement locations and at a minimum before and after any sound collection survey.

c) Field calibration differences:

i) If the calibration level after a sound collection differs from the previous calibration level by ±0.5 dB or less, all measurements made with that system shall be adjusted by one-half of the difference. Differences lower than or equal to 0.2 dB are exempt.

ii) Collected data with a difference between the initial and the final calibration exceeding ±0.5 dB will not be used, and sound collections performed showing such difference will be repeated. In such cases, equipment shall be checked.

iii) Any difference between the acoustical calibrator reference sound level and the SLM calibration reading will be reduced to zero by adjusting the SLM sensitivity in the field, prior to any sound collection.

iv) The calibration sound level results will be documented and reported.

5) WEATHER AND TESTING CONDITIONS

a) Wind conditions will be documented with information from the meteorological tower(s). Wind speed at hub heights will be documented.

b) Sky cover and solar radiation or cloud height will be documented with weather information from the most representative (as related to those conditions at the Facility site) National Weather Station or airport's weather advisory service.

c) All meteorological parameters of wind speed, wind direction, temperature, relative humidity, precipitation and atmospheric pressure (optional) will be evaluated at a minimum at one location on site (e.g. Meteorological tower or at a portable weather station). Wind speed will be measured at 2 mts +-0.20 meters above the ground at all locations to be tested.

d) Each weather station will be located at the most representative location of each pair of measurement locations as related to wind speed on the ground.

e) Portable weather stations will be located close to the sound microphones, far from any wind obstructions or vegetation that may affect the wind speed measurements.

f) Reasonable efforts will be made to schedule sound tests during a period of time when representative wind conditions (as related to the noise descriptors that need to be evaluated) are forecasted but, in all cases, such tests shall be performed during the weather conditions described in this Protocol.

g) Evaluation of maximum short-term noise limits will be conducted under the worst operational noise emissions (maximum sound power levels) and the most favorable propagation weather conditions (Downwind direction as defined in ISO 9613-2:1996 [1]).

h) Sound testing will not be conducted during adverse weather conditions such as rain, thunderstorms in the vicinity, snow fall, or under wet road conditions. Any data collected under these conditions will be discarded.

6) TESTING POSITIONS

a) Sound testing will be conducted at a minimum at the six (6) most potentially impacted positions: four non-participating and two participating residential positions (on private or public space as applicable) considering anticipated sound impacts from computer noise modeling results, any preliminary measurements and complaints, if any.

b) Three positions to be tested will be selected by the Applicant within 30 days after the start of commercial operations and approved by NYDPS-Staff within 60 days after the start of commercial operations. Remaining positions will be selected by DPS Staff within 60 days after the start of commercial operations.

c) Sound microphones will be located at a height of 1.5 meters above the ground. An uncertainty factor of 1.5 dBA will be utilized for assessing impacts at two story residences.

d) Final sound measurement positions will be selected to:
   i) Minimize the influence of traffic noise from local roads. Measurement positions should be no closer than 15 meters (50 ft.) from the center of any roadway, unless it is not possible to obtain permission from property owner(s) to collect sound information within the private property. In this case, measurement positions can be adjacent to the road, in public right-of-ways.
   ii) Avoid or minimize the influence of any mechanical or electrical noise sources from any private or public spaces such as air

[1] Wind direction within an angle of ± 45° of the direction connecting the centre of the dominant sound source and the centre of the specified receiver region, with the wind blowing from source to receiver.

conditioners, air condensers, heaters, boilers, fans, pumps, transformers, lighting, etc.

iii) Avoid or minimize the influence of sounds from water streams.

iv) Provide a clear sight view of the turbines where possible and minimize the effect of any sound obstruction.

v) Minimize the influence of reflections of any buildings and other small reflective surfaces as follows:

(1) Sound microphones shall not be located closer than 7.5 meters. (25 ft.) from any reflective surface.

(2) Sound microphones shall not be located closer than 1.5 meters. (5 ft.) from any reflecting object with small dimensions such as small trees, posts, bushes, etc.

(3) The sound level microphone height will be 1.5 ± 0.10 meters above ground elevation. Sound results for two or more story houses will be corrected by adding 1.5 dB to the results at 1.5 meters in broadband and fractional band basis.

e) Positions proposed by the Certificate Holders will be identified with satellite pictures and coordinates and forwarded to DPS for review. Upon approval by NYDPS-Staff of residential positions to be tested, the Certificate Holders will contact the landowner(s)/tenants(s) to request permission to collect outdoor sound readings close to their residences within the private properties. If permission is not granted or obtained, sound measurements can be taken on public space or an alternate proximal residential position, with the approval of NYDPS-Staff.

f) At its discretion, NYDPS-Staff can conduct or request the Certificate Holders to conduct sound testing at any existing residential location, prior to or during the test subject to the Certificate Holders' ability to obtain landowner consent (if applicable), and subject to equipment and personnel availability if NYDPS-Staff's request is made during the test.

7) SEASONS AND TESTING TIMES

a) Pursuant to Certificate Conditions of the Order at least two sound compliance tests shall be performed by the Certificate Holders after the commercial operations date of the Facility: One during the "leaf-off" season and one during the "leaf-on" season.

b) Within the first seven (7) months of the commercial operations date of the Facility, the Certificate Holders shall perform and complete the first Sound Compliance Test and the results shall be submitted to the Board, or the Commission after the Siting Board's jurisdiction has ceased, by filing with the Secretary a report from an independent acoustical or noise consultant, no later than eight (8) months after the commercial operations date, specifying whether or not the Facility is found in compliance with all Certificate Conditions on noise of this Certificate during the "leaf-on" or "leaf-off" season as applicable.

c) The second Sound Compliance Test shall be performed, and results shall be submitted to the Siting Board, or the Commission after the Siting Board's jurisdiction has ceased, by filing with the Secretary subject to the same conditions contained in the Order , but no later than thirteen (13) months after the commencement of operations of the Facility.

8) MEASUREMENT PROCEDURES:

Procedures will be as follows:

a) Data Collection Procedure for Operational Sound Testing (All Noise Sources Turned ON plus background sounds)[2]:
   i) Check SLMs calibration. Set any difference to zero at the beginning of the sound survey.
   ii) Verify that all wind turbines from the Wind Generating Facility are turned "ON" and in continuous operation as described in this protocol.
   iii) Report the time that the measurement is started. If operators are present external transient background sounds can be excluded by inhibiting data collection as stated in this section. Sound collections can be restarted or continued after the transient sound ceases.
   iv) Complete one 10-minute cumulative collection. Record and report the time at which each measurement is concluded.
   v) Continue with another 10-minute collection until at least six acceptable 10-min samples are collected (1-hour).
   vi) Proceed with testing the facility turned off.

b) Data Collection procedures for background sound test (with All Wind Generating Facility Noise Sources Turned OFF)[3]:
   i) Check SLMs calibration. Set any difference to zero.
   ii) Verify that all wind turbines from the Wind Generating Facility within a 1.5-mile radius of any position to be tested are turned OFF.
   iii) Complete two 10-minute sound collections at each evaluated position within the hour following the end of the operational sound tests (Wind Generating Facility Noise Sources "ON" plus background sounds).
   iv) Record and report the time at which each measurement collection is stopped.
   v) If operators are present, check SLMs calibration at the end of the measurements. Record results and set any difference to zero.

c) Time and duration of measurements in a day:
   Measurements of sound levels during
   i) the daytime will be collected between 7:00 a.m. and 6:00 p.m. EST;

[2] Operation sound testing will be conducted 1-hour before and after a shutdown event. The wind generating facility can continue operating as needed until the next shutdown occurs.
[3] Shutdown events can continue as needed but in all cases background sounds will be measured within the first and last 1-hour of a shutdown if it exceeds two-hours.

ii) the evening time will be collected between 6:00 p.m. and 10:00 p.m. EST; and

iii) the nighttime will be collected between 10:00 p.m. and 7:00 p.m. the next day EST.

d) Duration of measurements per season:

Measurements for evaluation of short-time noise descriptors (Leq-8-hour, Leq-1-h at 16 Hz, 31.5 Hz, 63 Hz.) will be collected for at a minimum 24 hours per season (a minimum of four hours of valid data for the Leq-8-h descriptor and two hours of valid data for the Leq-1 descriptor, collected at each selected position) at maximum sound power levels from the turbines and favorable sound propagation conditions as specified in section 5(g);

e) Transient Sounds

i) Transient Sounds: Exclusion of transient sounds is limited to external sound sources other than wind and wind turbine's noise. Transient noises produced within the Wind Generating Facility site will not be inhibited at the time of testing.

ii) Transient sounds can be excluded by operators present or by post processing of the data.

iii) For the purposes of this testing, the following sounds will be considered transient:

(1) Sounds caused by cars, trucks, motorcycles, planes and any means of transportation.

(2) Any sounds caused by human activity (e.g. conversations, shouting, music, use of any sound or mechanical equipment).

(3) Any sounds caused by animals such as dogs, birds, peepers and insects. When animal sounds are unavoidable (such as insect sounds during the summer) instruments may not need to be paused, provided the sounds can be filtered by post-processing as specified in this protocol.

(4) Transient sounds inhibited during operational sound testing will also be inhibited during background sound testing should they occur. SLMs will have means to inhibit data collection whenever a transient background sound occurs. Operators will pause or hold the sound collection while transient sounds occur and reset or continue the measurement after the transient sound has ceased.

iv) If operators are present, trigger cables are preferred so that operator's sounds and reflections are minimized.

v) SLMs with "delete-back" capabilities are also preferred. If SLMs with "delete-back" capabilities are used, the SLMs can be set up to a maximum deletion of a 10- second sound reading interval.

vi) Sound collection can be restarted or continued after the transient sound ceases.

vii) If operators are present, the Certificate Holder will ensure that personnel are qualified and properly trained to exclude transient events as specified in this protocol so that the need for post-processing is avoided or minimized.

9) BACKGROUND CORRECTIONS AND ANALYSIS OF RESULTS

No corrections for background sounds (noise sources OFF) are necessary if operational sound test results (with the noise sources ON plus the background sounds) comply with certificate conditions in the Order (See Section 2 of this protocol and the Order).

a) SHORT-TERM NOISE LEVELS AT RESIDENTIAL POSITIONS.

i) The fractional-band Leq 10-minute background sound levels will be logarithmically subtracted from the fractional-band Leq 10-minute operational sound levels (Wind Generating Facility sound sources ON plus background) for each measurement position in order to determine the Wind Generating Facility contribution to the total A- weighted sound levels. The “exact equation” (Equation 8), as contained in Note 2 of section 6.9 of ANSI/ASA S12.9-2013/Part 3, will be used and applied to the (A) 10-minute operational sound levels. If insect, bird, animal and/or leaf rustle sounds were present, they can be excluded from the measurements by correcting the applicable one-third frequency band sound levels at the frequencies where they occurred as appropriate. Overall corrected Leq (A) 10-minute background and operational sound levels will then be recalculated to obtain both background and operational overall Leq (A) 10- minute corrected sound levels. Both raw and corrected data will be reported with explanations.

ii) If the arithmetic difference between the operational sound levels (Wind Generating Facility noise sources turned ON plus background sounds) and the background sound levels (after turning the Wind Generating Facility noise sources OFF) is less than 3 dB, the calculated result will be reported and a “n/a” note will be added.

iii) Leq-1-h levels will be calculated as the energy-based average of six Leq-10-min consecutive samples.

iv) Leq-8-h levels will be calculated as the energy-based average of at a minimum four Leq-1-h consecutive valid samples. In no case will the calculation include more than eight Leq-1-h consecutive samples.

v) Operational noise levels from the Wind Generating Facility only (Leq 8-h), at the selected residential positions (after background corrections are applied), will then be evaluated for compliance with Certificate Conditions of the Order.

b) PROMINENT TONES:

i) Prominent tones will be defined as follows: A prominent discrete tone is identified as present if:

(1) The time-average sound pressure level (Leq) in the one-third-octave band of interest exceeds the time-average sound pressure level (Leq) in both adjacent one-third-octave bands and the threshold of hearing (as indicated in Table 1 of this protocol); and,

(2) The time-average sound pressure level (Leq) in the one-third-octave band of interest exceeds the arithmetic average of the time-average

sound pressure level (Leq) for the two adjacent one-third-octave bands by any of the following constant level differences:

(a)15 dB in low-frequency one-third-octave bands (from 25 up to 125 Hz);
(b)8 dB in middle-frequency one-third-octave bands (from 160 up to 400 Hz); or,
(c)5 dB in high-frequency one-third-octave bands (from 500 up to 10,000 Hz).

ii)Prominent tones will be evaluated by using the Leq-1-min sound level results (linear, Z or un-weighted). All collected data will be reported.

(1)The one-third octave band operational sound levels measured at each residential position will be evaluated, to determine if any prominent tones as defined herein were present during testing and caused by operation of the Wind Generating Facility.

(a)Initially, no correction for background sounds will be applied to the operational sound results for this evaluation.

(b)If any prominent tones are found, the operational sound pressure levels of the 1/3-octave bands containing the tones will be evaluated to determine if they exceed the values listed as hearing thresholds in Table 1 of this protocol for the respective frequencies. If they exceed the values, the prominent tones will be denoted as audible and the opposite will be denoted as inaudible. Operational prominent tones that are found being inaudible will be reported as such and may not require further analysis.

(c)If any prominent tones are found to be audible:
(i)The background sound levels Leq (With all Wind Generating Facility sound sources OFF) will be evaluated to determine if the prominent tone was caused by other sound sources in the background rather than noise sources from the Wind Generating Facility. The results of this evaluation will be reported.
(ii) The operational sound levels will then be corrected by using the exact equation listed in note 2 of section 6.9 (equation 8) of ANSI/ASA S12.9-2013/Part 3 to determine operational sound levels from the Wind Generating Facility sources only (Operational sound levels minus background sound levels). If the difference between an uncorrected operational sound level (Wind Generating Facility sound sources ON plus background sounds) and a background sound level is lower than 3 dB the operational sound level from the Wind Generating Facility sources only (background corrected) will be set equal to -99 dB for subsequent calculations (as recommended

by section 6.9 d. 1 of ANSI/ASA S12.9-2013/Part 3) and reported with an “n/a” note. Operational noise levels from the Wind Generating Facility noise sources only (background corrected) will then be evaluated for prominent tones. Results will be reported.

(iii) If any prominent tones are found, the operational sound levels from the Wind Generating Facility sources only (background corrected), will then be re- evaluated to determine whether or not the prominent tones are caused by the application of background corrections. In this case, the operational sound level from the Wind Generating Facility noise sources only (Background corrected) at each one-third frequency band of interest will be evaluated for audibility (as specified in section 11.b.3.ii of this protocol) and if found audible, it will be compared to the arithmetic average of the uncorrected operational noise levels (sources ON plus background sounds) of the two adjacent one third octave bands. Results will be reported.

(2) If any audible prominent tones are found at any evaluated residential positions and if they are found to be produced by the operation of the Wind Generating Facility, broadband Wind Generating Facility operational noise level results for that/those position(s) (Leq (A) -10 minute) will be evaluated for compliance with Certificate Conditions of the Order.

(3) Comments about whether or not the Wind Generating Facility is found in compliance with the audible prominent tone condition of the Order will be included in the report.

c) LOW FREQUENCY NOISE

i) Operational and background low frequency sound level measurements will be conducted at the selected residential testing positions as specified in this protocol. Sound levels at these positions will either be reported as extracted from the SLMs for the 16, 31.5 and 63 Hz full octave bands or calculated based on the sound levels from the 12.5 to 80 Hz one-third octave bands as appropriate and applicable.

ii) The Leq-10-min operational sound levels at the 16 Hz, 31.5 Hz and 63 Hz full- octave bands measured at the selected residential positions will be evaluated to determine if the low frequency noise levels from operation of the Wind Generating Facility (under testing operational conditions) in combination with natural environmental background sounds exceed 65 dB. Initially, no background sound corrections will be made. If operational sound levels (without any background corrections) comply with Certificate Conditions of the Order further analysis may not be needed.

iii) If other sound sources, not related to Wind Generating Facility operation, created or exacerbated low frequency sound levels during

the test, measured background Leq-10-min sound levels (Wind Generating Facility noise sources OFF) can be subtracted from the measured operational sound levels (All Wind Generating Facility noise sources ON plus background sounds) at the same specific one-third octave bands where they occurred in order to determine the Wind Generating Facility contribution to low frequency sounds at those bands. Background noise sources will be identified and described as feasible. The full octave band sound levels will then be recalculated as the energy based of Leq-10-min samples for each one-hour period. The full octave-band results will be reported. Both raw and corrected data will be reported.

iv) Compliance with, or exceedance of, the 65-dB requirement at 16, 31.5 and 63 Hz full octave bands of Certificate Conditions of the Order at selected residential positions and under tested operational conditions, will be evaluated and reported for all Leq-1-h results.

d) AMPLITUDE MODULATION

Evaluation of amplitude modulation, if required, will follow the procedures and methods specified by the Institute of Acoustics document: IOA Noise Working Group (Wind Turbine Noise), Amplitude Modulation Working Group, Final Report a method for Rating Amplitude Modulation in Wind Turbine Noise 09 August 2016, Version 1.

10) ADDITIONAL TESTING:

This protocol reflects the minimum requirements for the leaf-on and leaf-off compliance sound tests required by the Order. If additional testing is required those tests will be performed by following all the provisions of this protocol except as follows:

a) If a violation or non-compliance situation is found at any residences not previously evaluated, those positions will be added to the tests.

b) Seasons and testing times: If a violation or non-compliance situation is found in a specific time frame any retest may need to be conducted to cover approximately the times that the violation or non-compliance situation was found.

c) Scenarios to be tested: The Wind Generating Facility will be retested at approximately the same operational and weather conditions where the non-compliance situation or violation was found.

11) SUBSTATION TESTING

Testing from substation noise will be performed by following this procedure with the following modifications:

a) Sound testing will be conducted at a minimum at the two (2) most potentially impacted non-participating residences (seasonal or full-year, on private or public space as applicable) considering anticipated

sound impacts from computer noise modeling results, any preliminary measurements and complaints, if any.

b) Turbines should be operating at low-noise/low-energy production, such as at wind speeds lower than or equal to 5 meters per second at hub height to avoid interference and masking from wind turbine noise. Adjustments to results may be needed depending on the operational conditions during testing (ONAN / ONAF1 / ONAF2). If a violation or non-compliance situation is found at other hub-height wind conditions, testing (or retesting) will need to be conducted to cover approximately the operating and weather conditions at which the violation or non-compliance situation was found.

c) Testing will be conducted during minimal nighttime background sound conditions, between 10:00 p.m. and 7:00 a.m. the next day (Eastern time). If a violation or non-compliance situation is found in another time frame, any test or retest may need to be conducted to cover approximately the times of the day when the violation or non-compliance situation was found.

d) Since substation noise sources cannot be turned-off to measure background sounds, a proxy location will be selected. Select proxy location(s), far from the influence of the noise from the substation, at a location with similar soundscape than the location(s) that are intended to be tested. A location in the vicinity where noise sources from the substation are blocked by natural barriers (topography) or mand made structures (buildings) can also be selected.

e) Each location will be tested at a minimum for three hours, so that three 1-hour samples are obtained. Complete eighteen 10-minute sound collections at each evaluated position at the same times that background sounds are measured at the proxy location(s).

f) Testing of compliance with Certificate Conditions of the Order for substation components will also be conducted by following these provisions.

12)ADDITIONAL PROVISIONS:

a) A test plan will be developed as recommended by section 9.1.4 of ANSI S1.13-2005, prior to the test.

b) A final testing schedule will be provided to NYDPS-Staff after the Wind Generating Facility equipment is set up and conditions are evaluated. NYDPS-Staff will be notified of any changes to test procedures prior to or during the test, if they occur.

c) To avoid sound interruptions during testing, if communication equipment is used, it will not be operated on speaker/loudspeaker settings and will preferably be set with freehand earphones/microphones. All staff members and personnel will take proper actions to ensure that conversations and communications will not affect the sound collections.

d) All clocks, including any SLMs and weather station meter clocks will be synchronized with the Wind Generating Facility operational time. Any

difference between the Wind Generating Facility operational time and the official Eastern Standard Time will be noted and reported.

e) Sound testing will be conducted at each selected residential position over consecutive 10-minute periods at each position, for the operational sound tests and the background sound tests.

13)WITNESSING AND NOTIFICATIONS.

a) At the discretion of NYDPS, NYDPS Staff representatives may be assigned to witness any sound test.

b) At the discretion of the NYDPS, sound collections can be performed by NYDPS Staff with NYDPS instrumentation at any time, location and operational condition. NYDPS at its discretion can collect any information related to sounds from the facility and the environment, and weather conditions, including but not limited to any sound levels by using any metric or sound descriptor.

c) If the facility is required to conduct testing of the Wind Generating Facility at a specific operational condition that would require the Certificate Holders to modify the operation of any Wind Generating Facility equipment or setting any Wind Generating Facility equipment online or offline, NYDPS Staff shall coordinate with the Certificate Holders at least five (5) business days in advance of such testing. This advanced notice and coordination is required so the Certificate Holders can, among other things, ensure: Wind Generating Facility and operational conditions are in- order for testing; that any impact to its customers will be minimal; and that the Certificate Holders, and its customers, can properly staff to accommodate the service interruption, and subsequent restoration, if any. If NYDPS Staff desire to conduct sound or vibration testing from the Wind Generating Facility and no modification to operational conditions of Wind Generating Facility equipment are required, no prior coordination is required.

d) The Certificate Holders will coordinate with NYDPS Staff at least five (5) office days in advance of a tentative date for any sound tests.

e) The Certificate Holders will coordinate with NYDPS Staff on a final date at least two (2) office days prior to any sound tests.

f) The Certificate Holders will notify Town’s officials and applicable residents about the final dates and times of the compliance tests.

14)REPORTING AND DOCUMENTATION

A report will be prepared that includes at least the following analyses and documentation:

a) A listing of make and model for each SLM, acoustical calibrator, weather

station, weather hand held meter and anemometers (with corresponding serial numbers), and identifying which positions each instrument was used at, along with copies of laboratory calibration certificates for SLMs and calibrators, and any field calibration results (Sensitivity checks). SLMs specifications including type, sound floors, humidity and temperature ranges and settings will be included in the report along with a statement about whether the SLMs and calibrators had undergone laboratory calibration within two years prior to its use in the test. Accuracy for portable weather stations, hand held meters and/or anemometers will be documented along with a statement about whether the portable weather station and the hand-held meters or anemometers used for the tests comply with the accuracy requirements specified in this protocol;

b) The insertion loss of the windscreen as stated by the manufacturer or accredited independent laboratory, for the fractional bands of interest specified in section 4(c) of this protocol, and whether or not the insertion loss values in dB have been automatically or manually applied to the reported data;

c) The names and qualifications of all personnel who conducted and/or provided direct oversight during the testing. Operators shall be knowledgeable with respect to the operation, performance capabilities and limitations of sound and weather instrumentation, and the specifics of this protocol;

d) All logged A-Weighted (dBA) broadband Leq data measurements and results including the Lmax, L10, L90, Lmin values by electronic or digital means. If results are corrected, filtered or post-processed, both raw and corrected data will be reported;

e) All logged one-third octave band data and full octave band results for the Leq.

f) All measured and logged data will be reported to the nearest tenth of a decibel in digital and graphical format. Spreadsheet compatible files will be provided by electronic or digital means;

g) Sound measurements and calculations of sound levels shall be reported to the nearest 1/10 of a dB;

h) Field data sheets and notes;

i) Meteorological conditions during testing: The report shall include the continuous log of all measurements of meteorological conditions collected including average wind speed, average wind direction, ambient air temperature, relative humidity, barometric pressure (Optional) and rain fall (Precipitation). Sky cover and general weather conditions will be reported;

j) Broadband and fractional band results and corresponding wind data by electronic or digital means;

k) Evaluated residential and any sound monitor positions including GPS coordinates and approximate distances to the closest five turbines along with photos and a description of the state of vegetation and whether or not the closest wind turbines are visible from the sound microphone positions;

l) Height of sound microphones as related to the ground along with photos of the residential locations being evaluated and an identification of the number of stories.

m) Figures depicting the sound testing positions in relation to the Wind Generating Facility, property lines, roads and the existing residences as of the date of the Order that were evaluated with the test. Other existing non-residential buildings will be included for reference only.

n) A complete log of the operational load and operational conditions of the Wind Generating Facility and all its noise sources during testing periods. Statements about whether the operational conditions during testing comply with the requirements of this protocol will be included. Any difference between Wind Generating Facility's and Eastern standard time will be reported; and

o) An analysis of results including overall sound levels, prominent tones and low frequency noise levels and whether they were found to comply or exceed the applicable certificate conditions of the Order at any selected residential position and whether or not additional mitigation measures are necessary to comply with Certificate Conditions of the Order.

15)TERMS AND DEFINITIONS

a) Sound and Noise: "Noise" is usually defined as unwanted sound. If "Sound" comprises noises and other sounds, "sound" may be a broader designation. Sound sources within the Wind Generating Facility may be referred as both "noise" and/or "sound". Some animal sounds may be more properly referred to as "sounds" rather than "noise". For the purposes of this protocol the words "sound" or "noise" may be used interchangeably.

b) Background sound: all-encompassing sound associated with a given environment without contributions from the source or sources of interest as specified in this protocol.

c) Continuous background sound: background sound measured during a measurement period, after excluding the contribution of transient background sounds by inhibiting the collection or post-processing. For the purposes of this protocol the term "background sound(s)" is used for both "background sound(s)" and "continuous background sound(s)", interchangeably.

d) Operational sound: Sound that includes both Wind Generating Facility noise sources and background sound unless otherwise noted.

e) Wind Generating Facility sound only: All sounds originated from the Wind Generating Facility without contributions of background sounds as specified in this protocol.

f) Transient background sound: background sound associated with one or more sound events which occur infrequently during the basic measurement period, a measurement interval with or without the source operating, as specified in this protocol.

g) Protocol: Refers to this document, unless otherwise noted.

16) REFERENCES. (References listed in this section are for information purposes only).

a) ANSI S1.4-1983 (R 2006) American National Standard Specification for Sound Level Meters; and Amendment No. 1 in ANSI S1.4A-1985
b) ANSI/ASA S1.11-2004 (R 2009) American National Standard Specification for Octave-Band and Fractional-Octave-Band Analog and Digital Filters
c) ANSI/ASA S1.40-2006 (R 2011) American National Standard Specifications and Verification Procedures for Sound Calibrators
d) ANSI/ASA S1.43-1997 (R 2012) American National Standard Specifications for Integrating-Averaging Sound Level Meters
e) ANSI/ASA S12.9-2013/Part 3 (Quantities and Procedures for Description and Measurement of Environmental Sound. Part 3: Short-Term Measurements with an Observer Present)
f) ANSI/ASA S12.9-2005/Part 4 (Quantities and Procedures for Description and Measurement of Environmental Sound – Part 4: Noise Assessment and Prediction of Long-term Community Response).
g) ANSI/ASA S12.18-1994 (R 2009) American National Standard Procedures for Outdoor Measurement of Sound Pressure Level.
h) ISO 226: 2003, Acoustics – Normal equal-loudness contours.

Table 1: Thresholds of human hearing for evaluation of audibility of tones

1/3 Octave Band Center Frequency [Hz]	Threshold of Hearing [dB] (most sensitive 95 % of population)
20	68.5
25	58.7
31.5	47.3
40	40.4
50	33.9
63	28.6
80	24.0
100	19.9
125	15.9
160	11.7
200	8.1
250	5.1
315	2.4
400	0.3
500	-1.4
630	-3.0
800	-4.2
1,000	-4.7
1,250	-4.2
1,600	-6.5
2,000	-9.7
2,500	-12.5
3,150	-14.0
4,000	-13.4
5,000	-9.8
6,300	-2.8
8,000	3.1
10,000	3.6

The threshold levels are intended to account for the hearing threshold of 95% of the public. Values from 31.5 Hz to 10,000 Hz inclusive are taken from P05 in Table 2 of Kenji Kurakata, Tazu Mizunami and Kazuma Matsushita, Percentiles of normal hearing-threshold distribution under free-field listening conditions in numerical form, Acoustical Science and Technology Journal (published by Acoustical Society of Japan) Volume 26, Number 5 (2005), pp. 447-449. At 25 Hz the threshold level is 10 dB below the ISO 226:2003 median value and is also believed to account for the hearing threshold of 95% of the public.