NEW YORK STATE BOARD ON ELECTRIC
GENERATION SITING AND THE ENVIRONMENT

CASE 15-F-0122 - Application of Baron Winds LLC for a Certificate of Environmental Compatibility and Public Need Pursuant to Article 10 to Construct a Wind Energy Facility.

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

Issued and Effective: September 12, 2019

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NEW YORK STATE BOARD ON ELECTRIC
GENERATION SITING AND THE ENVIRONMENT

At a session of the New York State Board on Electric Generation Siting and the Environment held in the City of Albany on September 12, 2019

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

CASE 15-F-0122 - Application of Baron Winds LLC for a Certificate of Environmental Compatibility and Public Need Pursuant to Article 10 to Construct a Wind Energy Facility.

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(Issued and Effective September 12, 2019)

BY THE BOARD:

I. INTRODUCTION

By this order, we grant to Baron Winds LLC (Baron or the Applicant) a certificate of environmental compatibility and public need to construct and operate a wind farm generating facility in Steuben County, New York (the Project or Facility). We determine that, with the conditions attached to and made a part of this order, the Facility will meet all the 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 and the Associate Examiner appointed by the Department of Environmental Conservation, who summarized the record and made proposed factual findings and determinations in a Recommended Decision (RD) issued previously in this case. Our decision is based upon the evidentiary record, post-hearing briefs, RD, briefs of the parties on exception to the RD and opposing exceptions, public comments, and all applicable laws and policy.

II. BACKGROUND

A. Description of the Project

The proposed wind farm will consist of 68 turbines located in the Towns of Cohocton (23 turbines), Dansville (3 turbines), Fremont (33 turbines) and Wayland (9 turbines), in Steuben County, New York, and would have a maximum nameplate generating capacity of 242 megawatts (MW) (the Facility or the Project). Two turbine models will be used for the Project: the Gamesa G114 2.625 MW (11 turbines) and the Nordex N117 3.675 MW

(57 turbines).[1] The total height of both turbine models is approximately 492 feet, as measured from the tower base at ground surface level to the tip of the blade at its highest position.[2]

The Project will include the construction of approximately 16.5 miles of access roads to access the turbine locations, 31 miles of underground collection lines, a collection substation, a point of interconnection with the electric grid through the existing 230 kilovolt (kV) Canandaigua Switching Station owned and operated by the New York State Electric and Gas Company (NYSEG), up to four permanent meteorological (met) towers each approximately 100 meters[3] tall, up to two temporary staging/laydown yards for construction, and a 4,000 to 6,000 square foot operation and maintenance (O&M) building.[4] The Facility will be located on privately leased rural land that could continue to be used for farming, forestry and other comparable uses.

There are 44 existing wind turbines within five miles of the Facility. Thirteen of the turbines are from the 35-turbine Cohocton Wind Project, sixteen are from the 16-turbine Dutch Hill Wind Project, and fifteen are from the 27-turbine Howard Wind Project.[5]

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[1] To the extent the number of turbines differs from that contained in the RD, the changes reflect additional changes made to the Project during the latter part of the Article 10 process and that were not reflected in the RD.

[2] Hearing Exh. 9, Updated Application Exh. 6 (Redacted), p. 2. The exact height of the Gamesa G114 is 492.1 feet and the exact height of the Nordex N117 is 490.5 feet. Hearing Exh. 9, Updated Appendix GGG, Fig. 5; 3/20/19 Tr. 40.

[3] 100 meters is approximately 328 feet.

[4] Id., Updated Application Appendix GG, p. 1.

[5] Id., Updated Application Exh. 4, p. 4.

B. Procedural History

On February 26, 2015, Baron, then a subsidiary of Everpower Wind Holdings, Inc., submitted a letter to the Secretary of the Siting Board, indicating its intent to apply for a Certificate to build and operate a 300 MW wind energy project located in the towns of Avoca, Cohocton, Dansville, Fremont, Hartsville, Hornellsville, Howard and Wayland, in Steuben County, New York. With that letter, Baron filed its Public Involvement Program Plan (PIP), pursuant to Part 16 of the Official Compilation of Codes, Rules and Regulations of the State of New York (NYCRR) §1000.4.[6] Following public comment and DPS review,[7] Baron filed a final revised PIP on May 1, 2015.

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[6] 16 NYCRR 1000.4, entitled "Public Involvement," requires Article 10 applicants to submit a proposed PIP plan to DPS for review as to its adequacy at least 150 days prior to the submittal of a preliminary scoping statement. As stated in 16 NYCRR 1000.4(a), the public involvement process is intended "to ensure throughout the Article 10 process that the Board is fully aware of the concerns of stakeholders and that the Board's consideration of the application is not delayed." Accordingly, 16 NYCRR 1000.4(a) requires "applicants to actively seek public participation throughout the planning, pre-application, certification, compliance, and implementation process" and "to encourage stakeholders to participate at the earliest opportunity in the review of the applicant's proposal so that their input can be considered."

[7] Under 16 NYCRR 4.3(d), DPS counsel must submit a list of trial staff to the hearing examiners. Pursuant to 16 NYCRR 1.2, persons so designated serve as an independent arm of DPS to prosecute a matter before the Siting Board. Generally, in the pre-application stage of an Article 10 matter, no trial staff is designated. Thus, during that stage, any actions taken by DPS may properly be considered actions of the entire Department. However, the trial staff team that is designated after an application is filed acts as any other party to the proceeding. In this order, "DPS Staff" refers to positions taken by trial staff, as opposed to DPS in general. We use the same convention for other state agencies to note the same distinction.

On August 10, 2016, Baron filed a Preliminary Scoping Statement (PSS), removing the Towns of Hartsville, Hornellsville and Howard from the Project and proposing to build the Project in the Towns of Avoca, Cohocton, Dansville, Fremont and Wayland. Baron proposed to construct up to 120 wind turbines, approximately 57 miles of underground and overhead collection lines, approximately 36 miles of access roads, up to three permanent met towers, an O&M building and up to four temporary construction staging/laydown areas. To deliver power to the grid, Baron proposed to construct a collection substation adjacent to an existing interconnection substation, which would interconnect with the NYSEG's 230 kV transmission line in the Town of Cohocton.

On August 25, 2016, the Secretary issued a Notice Inviting Comments on the PSS. DPS and the Department of Health (DOH) separately filed their comments on August 31, 2016. DEC filed its comments on September 1, 2016. After receiving an extension of time, Baron filed its response to those comments on September 30, 2016.

On August 25, 2016, the Secretary also issued a Notice of Availability of Pre-Application Intervenor Funds and Deadline for Submitting Funding Requests. That notice stated, among other things, that Baron had submitted the required intervenor funding fee of $105,000 to be used to defray certain expenses incurred by municipal and local parties in connection with their involvement as intervenors in the pre-application scoping phase of this proceeding and setting September 14, 2016, as the due date for the filing of requests for the award of such funds. No requests were filed by the due date. The Secretary issued additional notices about the availability of intervenor funds on October 12, November 23, and December 22, 2016. Thereafter, applications for funding were filed by the Towns of Avoca and

Howard, jointly; the Town of Cohocton; Citizens for Responsible Wind; the Town of Dansville; the Town of Naples; the Naples Central School District; the Town of Wayland; and the Town of Fremont. The Examiners issued four rulings that, collectively, awarded the pre-application intervenor funds as follows: $42,000 to the Towns of Avoca and Howard, $20,000 to the Town of Cohocton, $13,000 to the Town of Dansville, $10,230 to the Town of Naples, and $19,770 to the Town of Wayland.[8]

Pursuant to a notice issued by the Secretary on September 2, 2016, the Examiners held a pre-application procedural conference on October 5, 2016, in Hornell, New York, which is located near the Project area. At the procedural conference, the Examiners ruled that Baron could initiate the stipulations process. During the stipulations process, the Project applicant, DPS, and other statutory parties and interested participants may enter into agreements as to the appropriate nature and scope of the studies that the applicant must conduct to support its Article 10 application. The scope and methodology of the studies are documented in written stipulations.[9] In general, the applicant's studies should evaluate the potential impacts of the Project on the environment, public health, and other public interest factors.

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[8] The rulings were issued on December 30, 2016, February 3, 2017, March 23, 2017, and June 26, 2017. In the February 3, 2017 ruling, the Examiners also denied the request for funds filed by the Naples Central School District upon the ground that it was not a local or municipal party eligible for an award of intervenor funds. In a ruling issued on July 26, 2017, the Examiners denied the Town of Fremont's request for intervenor funds upon the ground that it filed the request after all pre-application intervenor funds had been awarded to other intervenors. Citizens for Responsible Wind withdrew its request for intervenor funding. On October 3, 2018, the Town of Naples withdrew as a party.

[9] See 16 NYCRR 1000.5(j) and (k).

When the application is submitted, it is evaluated both for its compliance with 16 NYCRR Part 1001 and the final stipulations to determine whether the application complies with PSL §164.

On July 7, 2017, after engaging in the stipulations process with DPS, DEC, DOH and the Department of Agriculture and Markets (DAM) regarding the studies necessary to complete its Article 10 application, Baron filed draft stipulations, excluding a draft stipulation concerning noise and vibration, which Baron later filed on September 1, 2017. On July 11, 2017, the Secretary issued a notice inviting comments on the draft stipulations filed on July 7. On September 6, 2017, the Secretary issued a notice inviting comments on the draft stipulation on noise and vibration. On November 6, 2017, after receiving public comments on the draft stipulations,[10] Baron filed final stipulations executed by Baron, DPS Staff, DEC Staff and DOH Staff. On November 13, 2017, Baron filed DAM Staff's signature page to the final stipulations.

By letter dated November 27, 2017, Baron began the process of filing and supplementing its formal application for the 300 MW Project, which Baron now proposed would consist of up to 76 wind turbines located in the Towns of Cohocton, Dansville, Fremont and Wayland. In addition to corrections or updates to the application filed on December 20, 2017, and January 2 and June 18, 2018, Baron filed supplements to its application on March 12, June 15, August 2 and August 23, 2018. On June 29, 2018, Baron filed updated information notifying the Siting Board that, due to a recent transaction involving its upstream owners, Baron was now a subsidiary of Innogy Renewables US, LLC. By letter dated August 29, 2018, the Chair of the Siting Board notified Baron that its application, as supplemented, complied

[10] See 16 NYCRR 1000.5(j)(3).

with PSL §164,[11] and set October 11, 2018, as the date for the commencement of a public hearing.[12]

On October 11, 2018, the Examiners held public statement hearings during the afternoon and evening in Hornell, New York. Ten members of the public provided statements at the afternoon hearing and eight people provided statements at the evening hearing. Those statements are summarized in the Public Involvement and Comment section below.

On October 12, 2018, the Examiners conducted a procedural conference, also in Hornell, to identify interested parties, identify issues for adjudication, award intervenor funds, and establish a procedural schedule. As stated in a notice issued by the Secretary on January 8, 2018, and updated by a notice issued on February 21, 2018, a total of $375,879.52 of intervenor funds were available for award to eligible municipal and local parties. By rulings issued on October 15, 2018 and November 8, 2018, the Examiners awarded all of those funds, in varying amounts, among Mr. Martin Oehlbeck and the Towns of Fremont, Wayland, Cohocton and Dansville. On October 31, 2018, the Examiners issued a procedural schedule setting the following due dates in this case: January 11, 2019, for the filing of direct testimony and exhibits; February 1, 2019, for the filing of rebuttal testimony and exhibits; February 20, 2019 through March 1, 2019, for evidentiary hearings; March 22, 2019, for the filing of briefs; and April 10, 2019, for the filing of reply briefs.

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[11] Unless extended by the applicant or the Siting Board, the Siting Board must make its final decision on the Article 10 application within twelve months after the Chair determines that the application complies with PSL §164.

[12] PSL §165(1) provides that, upon finding that the application complies with section 164, the Chair of the Board will "fix a date for the commencement of a public hearing."

On November 9, 2018, Baron filed a notice stating its expectation to engage in exploratory settlement discussions at that time and advising that Baron would later notify all parties of and provide them with an opportunity to participate in any future, formal settlement negotiations. No formal notice of settlement negotiations was filed and no such negotiations occurred. On December 3, 2018, the Examiners issued a ruling pursuant to PSL §165(2), finding that all issues identified by the parties at the October 12th procedural conference were appropriate issues for the parties to address in this proceeding.

On January 9, 2019, Baron requested an extension of the procedural schedule. Baron stated that it sought the extension because it intended to file a comprehensive update to its Article 10 application on February 1, 2019, which would incorporate various Facility design changes that Baron hoped would resolve the need for certain lengthy testimony and hearings. In response to the Examiners' inquiry whether Baron would agree to a commensurate extension of the twelve-month statutory timeframe for the Siting Board's decision, Baron stated that it agreed to extend the statutory deadline from August 29, 2019 to September 15, 2019. DEC Staff, DAM Staff, DOH Staff, the Town of Fremont, Martin Oehlbeck and Alice Sokolow each responded in support of or without objection to Baron's request for an extension of the procedural schedule. DPS Staff took no position on Baron's request for an extension. By ruling issued on January 16, 2019, the Examiners issued a revised procedural schedule setting the following due dates: February 1, 2019, for Baron's filing of updated application materials; February 22, 2019, for the filing of direct testimony and exhibits; March 12, 2019, for the filing of rebuttal testimony and exhibits; March 20, 2019 through March 22, 2019,

for evidentiary hearings; April 12, 2019, for the filing of briefs; and April 26, 2019, for the filing of reply briefs.

Baron filed its updated application materials on February 1, 2019. Among other things, Baron reduced the number of proposed turbines from 76 to 69, reduced the amount of access roads from approximately 21.4 miles to 16.5 miles, and reduced the amount of collection lines from approximately 36 miles to 31 miles.[13] Baron also proposed to move one turbine, number 34, along with its access road and collection line, to address the potential impact of the turbine on FM radio station WCIK. To accommodate landowner requests and to minimize impacts to golden nematode quarantine areas,[14] Baron proposed an alternate access road to turbines 62, 66, 89 and 91. In addition, Baron proposed certain alternate collection line routes and to relocate all overhead collection lines underground, to relocate the laydown yard and to relocate the Project substation from the northwest corner of the existing NYSEG Canandaigua switchyard in Cohocton to the southeast corner of that facility. Baron also identified that it had selected two turbine models for the Project – the

[13] Hearing Exh. 9, Updated Application Appendix GG, p. 1.

[14] The golden nematode is one of the world's most damaging potato pests. 3/20/19 Tr. 353. As discussed in more detail later in this order, Baron originally proposed to site one of the turbines in a golden nematode quarantined and regulated field. Id. In response to concerns raised by DAM Staff about the siting of that turbine, Baron removed the turbine from the Project and, among other things, proposed to relocate an access road and collection line outside of the quarantined area. Id., p. 18.

Gamesa G114 2.625 MW and the Nordex N117 3.675 MW.[15] The application update addressed the implications of the proposed changes and selection of the turbine models and contained various new or revised exhibits and appendices, including a revised Complaint Resolution Plan, Preliminary Noise Impact Assessment, Visual Impact Assessment, Shadow Flicker Report and Decommissioning Plan.

On February 22, 2019, DPS Staff, DEC Staff, DAM Staff, Martin Oehlbeck, Alice Sokolow, and the Towns of Fremont, Wayland and Cohocton filed direct testimony and exhibits. On March 11, 2019, Intervenor Sokolow refiled her direct testimony with references to numerous additional exhibits that she also filed that day. On March 12, 2019, Baron and Intervenor Oehlbeck filed rebuttal testimony and exhibits. In response to concerns raised by DAM Staff about the presence of turbine T66 in a golden nematode quarantine area located in the Town of Fremont, Baron agreed in its rebuttal testimony to drop that turbine from the Project, reducing the maximum number of turbines to 68.[16]

The Examiners held evidentiary hearings in the Town of Fremont on March 20 through 22, 2019, and, with the consent of the parties, in Albany on March 25, 2019. At the evidentiary hearings, DAM Staff, the Towns of Cohocton and Wayland, and Intervenor Oehlbeck indicated that the issues raised in their

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[15] In her Brief on Exceptions, Intervenor Sokolow questions why Baron delayed in documenting changes to the Project and states that the changes raised more unresolved issues with less time to properly address them. However, Intervenor Sokolow did not object to Baron's request for an extension of time to February 1, 2019 to submit its updated application materials. Nor does she identify any issues that are unresolved or not properly addressed as a result of the comprehensive process followed in this case.

[16] 3/20/19 Tr. 18.

testimony were addressed and resolved by Baron's rebuttal testimony.[17] The Examiners overruled Baron's motion to strike Alice Sokolow's pre-filed direct testimony and various additional exhibits she filed on March 11.[18]

The evidentiary record includes 1,899 pages of hearing transcripts and 293 exhibits. Baron, DPS Staff, DEC Staff, DAM Staff, DOH Staff, the Town of Fremont, Intervenor Oehlbeck and Intervenor Sokolow filed initial post-hearing briefs on April 16, 2019; Baron, DPS Staff, DEC Staff and the Town of Fremont filed reply briefs on April 28, 2019.[19]

The Secretary issued the Examiners' RD on May 24, 2019. On June 3, 2019, the Secretary issued a Notice Seeking Public Comment on the RD. On June 13, 2019, Baron, DPS Staff, the Town of Fremont, and Intervenor Sokolow filed exceptions to the RD.[20] Several individuals filed comments after the RD was issued, many of which were in the form of questions rather than comments. On June 27, 2019, Intervenor Sokolow filed a Brief

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[17] 3/20/19 Tr. 373-377, 384, 390, 395-396. In addition, Mr. Oehlbeck formally withdrew the direct and rebuttal testimony of his noise expert, Daniel Prusinowski, and withdrew his motion for a ruling requiring Baron to post additional intervenor funds. Baron, in turn, withdrew its motion to strike Mr. Prusinowski's testimony.

[18] 3/20/19 Tr. 495-501; 3/25/19 Tr. 12-16.

[19] On April 11, 2019, Baron filed a petition with the New York State Public Service Commission requesting issuance of a Certificate of Public Convenience and Necessity pursuant to PSL §68. That petition is the subject of a separate proceeding in Case 19-E-0277.

[20] Intervenor Sokolow represents her interests as well as those of individual parties Berton Candee, Virginia L. Fullam, Thomas M. Flansburg and Mary A. McManus.

Opposing Exceptions to the RD.[21] On June 28, 2019, Baron, DPS Staff and DEC Staff filed Briefs Opposing Exceptions to the RD. On July 1, 2019, the Town of Fremont filed a Brief Opposing Exceptions to the RD, which has been accepted for filing although it was filed after the due date.

C. Public Involvement and Comment

To provide the Siting Board with the complete context of local concerns, the Siting Board's regulations require applicants to promote public involvement throughout the Article 10 process. The regulations therefore require applicants to produce a PIP plan in consultation with State agencies and other stakeholders.[22] A PIP plan should be designed to encourage stakeholder participation throughout the planning, pre-application, certification, compliance and implementation process. The PIP plan also should detail an applicant's plans to foster public involvement through education about the proposed Project and the Article 10 process.

Baron submitted a proposed PIP plan to DPS on February 26, 2015. DPS reviewed the plan and provided comments. After considering those comments and incorporating certain recommendations, Baron filed its revised PIP plan on March 1, 2015. Pursuant to the PIP plan, Baron encouraged participation

[21] To the extent that Intervenor Sokolow's Brief Opposing Exceptions raises arguments that are not actually in opposition to exceptions raised by other parties but are free-standing arguments, those arguments are not appropriately before us. For example, Intervenor Sokolow's current complaints about Baron's website, the PIP, the description of the Project, and her contention that Site Engineering and Environmental Plan (SEEP) documents should include a review of Baron's compliance with local laws, are not appropriately raised in a Brief Opposing Exceptions.

[22] 16 NYCRR 1000.4; 16 NYCRR 1001.2(c) and (d).

from affected local, State and federal agencies, as well as from members of the public. As noted in the RD, Baron, among other things, attended numerous local town board meetings; communicated with certain stakeholders by letter, email and telephone; hosted five open houses for the public between June 2015 and February 2018 to provide information about the proposed Project and the Article 10 process; held online webinar sessions with the host towns to address viewpoint selection for visual analysis for the Facility; provided Project updates to stakeholders in various forums; and established a Facility-specific website and a toll-free phone number for public questions and comments. Moreover, Baron posted in local newspapers notices of the open houses, the filing of the PSS and the Public Statement Hearings in Hornell. Baron also sent notices to stakeholders of the filing of the Article 10 application and the Public Statement Hearings. In testimony, DPS Staff has recognized that Baron "was successful in implementing the majority of [the] PIP plan elements."[23]

Nevertheless, DPS Staff asserts, and Baron concedes, that, before February 2017, Baron's communications with stakeholders had deficiencies. As DPS Staff notes in testimony, Baron apparently did not include host and adjacent landowners on a master stakeholder list when it filed its PIP plan in March 2015 and when it filed its PSS in August 2016. Baron explains that, prior to February 2017, lists of host and adjacent "landowners in the proposed Project vicinity were incomplete as the Project's final component layout had not been identified."[24] However, DPS Staff agrees with Baron that, beginning in February 2017, Baron notified the entire stakeholder list of Project

[23] 3/20/19 Tr. 232.

[24] 3/20/19 Tr. 717-718.

updates going forward. As the Examiners stated in the RD, that may explain the statements made by a few landowners at the Public Statement Hearings that they had not received all notices about the Project. It also is consistent with Intervenor Oehlbeck's testimony that he did not receive notices about the Project until February 2017, when Baron sent a letter to certain landowners about a private well survey, and again in November 2017, when Baron provided notice to the entire stakeholder list, including host and adjacent landowners, that it had filed its Article 10 application. The Examiners determined that, in any event, any deficiency in Baron's pre-application stage notification to landowners did not appear to have reduced public participation in the case during the post-application stage.

On July 30, 2018, Intervenor Sokolow filed a motion seeking "corrective actions" with respect to the ongoing implementation of Baron's PIP plan. She asserted, among other things, that Baron had not sufficiently informed the public that it proposed to build 25 wind turbines in the Town of Cohocton, had not timely filed reports listing its PIP plan activities, and needed to make its website for the Project more user friendly.

In a ruling issued on September 17, 2018, the Examiners concluded that the number of turbines to be sited in each specific town was first established in the Article 10 application and that Baron provided the public with appropriate notification of the number of turbines to be sited in the Town of Cohocton. However, the Examiners agreed with Intervenor Sokolow's contention that Baron was not diligent in filing timely PIP updates. The Examiners noted that, although Baron filed an updated report on its PIP activities on DPS's electronic Document and Matter Management (DMM) system in August 2018, when Intervenor Sokolow's motion was pending, it should

not have taken Baron approximately seven months to make that updated filing. Accordingly, the Examiners required Baron to file future updates on a quarterly basis or after significant events occurred. Finally, noting that Baron's website provided separate links to the original Article 10 application, exhibits and attachments filed on DMM, the Examiners directed Baron also to provide separate links to updated/revised application documents filed on DMM or to provide a clear explanation that such updated/revised documents are available on the DMM system. Baron filed updated PIP reports on DMM in October 2018 and February 2019. Baron has posted those PIP updates on its website and has updated its website to indicate that a complete Project record can be accessed on DMM.

Prior to the Public Statement Hearings in Hornell on October 11, 2018, the Secretary mailed notice of the hearings to approximately 100 municipal and elected officials, agencies and community-based organizations. Before those Public Statement Hearings, the Examiners provided the public with an overview of the Article 10 process and Baron provided an overview of the Project. At the Public Statement Hearings, a member of the Town of Cohocton Town Board, the Deputy Supervisor of the Town of Wayland, and a few participating landowners spoke in favor of the Project as providing positive economic and/or environmental benefits. Other people stated that eagles recently had been sighted in the Project area, objected to payments in lieu of taxes (PILOT) for wind farm projects, raised concerns with the proposed funding process for decommissioning of the Project, expressed concerns about changes in ownership of the Project,[25]

[25] The changes in ownership apparently gave rise to concerns about Baron's financial health. Baron's financial health will be addressed in proceedings under PSL §68 in Case 19-E-0277.

and opined that the Project, alone or in conjunction with other wind energy projects, could have negative impacts on public health. One person suggested improvements to the Article 10 process, another person stated concerns about the transparency of the process, and one person suggested that nonparticipating landowners should be given "a little extra consideration."

In addition to public comments received at the Public Statement Hearings, approximately 65 public comments were posted to the DMM system throughout this proceeding, from March 2015 to April 2019. Various commenters opposed the Project stating that it would ruin the rural upstate viewshed, displace wildlife and agriculture, create noise and well water pollution, decrease tourism and property values, raise the cost of electricity, require tax subsidies to be profitable, and give rise to a myriad of health hazards, all while providing little energy and no benefits to local taxpayers. One commenter stated that the proposed operation of numerous turbines in noise reduction operation (NRO) mode to meet noise design goals showed that the Project was poorly designed and suggested that industrial wind turbines should be sited in industrial parks rather than in residential areas. Other commenters raised concerns about shadow flicker, infrasound, proposed setback distances, increased dust from access roads, increased traffic, cumulative impacts from the Project and other nearby windfarms, Baron's compliance with the Town of Fremont Comprehensive Plan, and the need for better noise control regulations. Several commenters were in favor of the Project, touting the economic and environmental benefits that the Project would bring to local communities.

After the Secretary issued the RD for comment, one commenter stated that the Project will have a detrimental impact on eagles, hawks, bats and other creatures, and that wind farms

should be built closer to the downstate area where the electricity is needed. Another commenter expressed concerns about the effects of turbines on non-participating landowners with pre-existing illnesses and about the effects of the turbines on ambient noise. One commenter stated that the Project will make people sick and destroy their lives so that a few people can benefit monetarily. One commenter stated that New York over-regulates in all areas except for industrial-sized wind projects and that people should not be permitted to waive their rights under local laws by signing Good Neighbor Agreements. Other commenters complained about the benefits of PILOT payments, the amount of energy that will be produced by the Project, the purported lack of evidence that the Project will benefit the environment, and that the New York Independent System Operator was not a member of the Siting Board.

III. FINDINGS AND DETERMINATIONS

A. Article 10 Standards

Between 1992 and 2003, the process applicable to siting major electric generating facilities in New York was contained in PSL Article X. Article X expired on January 1, 2003, subjecting proposed siting projects to decision-making and permitting under the State Environmental Quality Review Act (Environmental Conservation Law [ECL] Article 8 [SEQRA]) and other State and local laws. On August 4, 2011, Governor Andrew Cuomo signed into law the Power NY Act of 2011 creating a new

PSL Article 10,[26] which applies to "major electric generating" facilities – namely, electric generating facilities with a nameplate generating capacity of 25 MW or more.[27]

The updated Article 10 recreated the Siting Board and directed it to establish rules and regulations relating to the procedures to be used in certifying major electric generating facilities. The Siting Board is a multi-disciplinary body comprised of five permanent members: the Chair of the Public Service Commission and Chief Executive Officer of the DPS, who also serves as Chair of the Siting Board; the Commissioner of Environmental Conservation; the Commissioner of Health; the Chair of the New York State Energy Research and Development Authority (NYSERDA); and the Commissioner of Economic Development (Empire State Development). To include local input into the Siting Board's decisions, Article 10 also establishes two ad hoc Board positions that are reserved for residents of a municipality in which a facility is proposed to be located, one appointed by the president *pro tempore* of the Senate and the other by the speaker of the Assembly.[28]

Pursuant to PSL § 161(2), after receiving Baron's final Public Involvement Plan, the Secretary, by letters dated May 15, 2015, informed the municipal chief executive officers in the Project area that, if an Article 10 application was filed, they would be required to nominate ad hoc Board members to the

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[26] L. 2011, c. 388 (effective August 4, 2011). NY Senate Bill No. S5844 and NY Assembly Bill No. A08510 of the 2011-12 Legislative Session. The Bill states that its purpose was, among other things, to "reauthorize and modernize Article X of the Public Service Law, regarding siting of major electric generating facilities in a manner that enhances public participation and augments environmental justice."

[27] PSL §162(1).

[28] PSL §160(4).

Siting Board and that two ad hoc members would be appointed to the Siting Board to provide a local voice in the review of the Project and decision on the application. After receipt of the Applicant's Preliminary Scoping Statement, then-Chair of the Siting Board, Audrey Zibelman, by letters dated August 12, 2016, sought nominations from municipal chief executive officers in the Project area for ad hoc Board members and requested that the president *pro tempore* of the Senate and the Speaker of the Assembly each appoint an ad hoc Board member from the lists of nominees submitted by the municipal chief executive officers. On September 20, 2016, the president *pro tempore* of the Senate appointed Mr. Gregory Fuerst of Avoca as an ad hoc member of the Siting Board. The Speaker of the Assembly did not appoint an ad hoc member to the Siting Board within 30 days of receiving the list of nominees, nor did Governor Andrew Cuomo thereafter appoint an ad hoc member to the Siting Board. By letter dated October 3, 2018, Mr. Fuerst resigned as an ad hoc member of the Siting Board. No further ad hoc members have been appointed to the Board.[29]

Article 10 also charges the Siting Board to make specific findings before issuing a Certificate. Specifically, in any decision on an application, PSL §168(2) requires that the Siting Board make explicit factual findings as to the probable environmental impacts of the construction and operation of the facility, including impacts on (a) ecology, air, ground and surface water, wildlife, and habitat; (b) public health and safety; (c) cultural, historic, and recreational resources, including aesthetics and scenic values; and (d) transportation,

[29] In her Brief on Exceptions, Intervenor Sokolow asserts that the lack of representation on the Siting Board of ad hoc members and lack of choice of ad hoc members by the Assembly and Governor Cuomo is a "travesty and very telling of a broken process." Sokolow Brief on Exceptions, p. 2.

communication, utilities and other infrastructure. The Siting Board's findings must examine the cumulative impact of emissions on the local community to determine whether the construction and operation of the Facility will result in a significant and adverse disproportionate environmental impact.[30]

PSL §168(3) specifically prohibits the Board from issuing a Certificate "unless the Board determines" that: the facility is a beneficial addition to, or substitution for, the electric generation capacity of the State; the adverse environmental impacts of the project's construction and operation have been adequately minimized or avoided to the maximum extent practicable; and, the construction and operation of the facility will serve the public interest. The Siting Board must also determine that the facility is designed to operate in compliance with applicable State and local laws and regulations. To assist the Siting Board in its local law determination, PSL §168(3) requires that the Siting Board provide the affected municipalities an opportunity to present evidence on its own ordinances, laws, resolutions, regulations or other relevant local actions. PSL §168(3) states that the Siting Board may not issue a Certificate unless it determines either that the facility does not result in or contribute to a significant and adverse disproportionate environmental impact in the community in which it would be located, or, if it does create such an impact, that the applicant will avoid, offset or minimize such to the maximum extent practicable for the duration of the Certificate.

Pursuant to PSL §168(4), the Siting Board's conclusions under PSL §168(3) are to be supported by consideration of the state of available technology, the nature

[30] PSL §168(2)(d).

and economics of reasonable alternatives, the Board's PSL §168(2) findings on the project's environmental impacts, the impact of construction and operation of any related project facilities, the consistency of the construction and operation of the facility with the most recent State energy plan, and the impact on community character and whether the facility would affect communities that are disproportionately impacted by cumulative levels of pollutants. Finally, the Board may consider any other social, economic, visual or other considerations that it deems pertinent. We have examined the record evidence regarding these factors, where relevant, in our discussion of the PSL §168(3) determinations.

The applicant for a Certificate bears the burden of proof to demonstrate that the Siting Board can make all findings and determinations required by PSL §168.[31] As to factual matters, "the party bearing the burden of proof must sustain that burden by a preponderance of the evidence unless a higher standard has been established by statute or regulation."[32]

B. Site Engineering and Environmental Plan

Baron and DPS Staff disagreed over the filing of Site Engineering and Environmental Plan (SEEP) specifications and documents. The Examiners considered whether Baron should be required to develop SEEP specifications in consultation with DPS Staff and DEC, file the SEEP specifications as a compliance filing, and then, after the SEEP specifications document is approved by the Siting Board or the Public Service Commission, file SEEP documents as separate compliance filings.[33] The

[31] 16 NYCRR 1000.12(b)(1).

[32] 16 NYCRR 1000.12(c).

[33] RD, pp. 20-24.

Examiners concluded that Baron should not be required to file a SEEP specifications document as an initial and separate compliance filing, that Baron should be allowed to file separate SEEP documents as compliance filings as necessary for each phase of construction and operation of the Facility, and that, in preparing its SEEP documents, Baron should be required to follow all applicable requirements of the generic SEEP specifications document attached as an exhibit to DPS Staff's proposed Certificate Conditions.[34] This discussion addresses general arguments raised by the parties regarding the SEEP specifications document and SEEP compliance filings; arguments concerning the SEEP specifications and compliance filings regarding wetlands and streams are discussed in section III.D.4 below.

Baron argues that the RD is unclear as to whether the SEEP specifications document attached as Appendix B to the RD is intended to be a final document or a working document that can be modified at any time.[35] Baron asserts that, to the extent the Examiners intend the SEEP specifications document to be a final, enforceable document, the Examiners' recommendation on page 49 of the RD that "DEC Staff's proposed [wetland] conditions be considered during development of the" SEEP or equivalent documents, is "inconsistent with that goal."[36] Further, Baron states, to the extent the Examiners intend the SEEP specifications document to function as a guidance document that can be modified during the compliance filing review process, "it

[34] RD, pp. 25-26.

[35] Baron's Brief on Exceptions, p. 7.

[36] Baron's Brief on Exceptions, p. 8.

is neither necessary nor appropriate to append [that document] to the Certificate Conditions and make it enforceable."[37]

Baron argues that, even if we conclude that the SEEP specifications document is necessary and must be included with the Certificate Conditions, the document and proposed Certificate Condition 52 should be revised in certain respects.[38] First, Baron asserts that we should make it clear that the SEEP specifications document is a guidance document only and that Baron is permitted to deviate from the SEEP specifications to accommodate the specifics of the Project.[39] Baron maintains that such an approach will relieve it of requirements that would result in filings that are unnecessary, burdensome or duplicative, while ensuring that compliance filings are properly made. In that regard, Baron notes that compliance filings must be approved by the Siting Board or Public Service Commission and that Baron will consult with DPS as the Applicant develops its compliance filings. Both procedures, Baron states, will ensure that compliance filings will meet DPS criteria for formatting and content.[40]

Second, Baron asserts that it should not be required to submit information as a compliance filing that it already has supplied during the application process, such as, for example, certain information about measures to be taken to protect streams and wetlands, or about the geologic, historic, and scenic or park resources that may be affected by construction of the Project.[41] Baron states that, to the extent the SEEP

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37 Baron's Brief on Exceptions, p. 8.

38 Baron's Brief on Exceptions, p. 8.

39 Baron's Brief on Exceptions, p. 8.

40 Baron's Brief on Exceptions, p. 8.

41 Baron's Brief on Exceptions, p. 9.

specifications seek such duplicative information, the Applicant should be allowed to omit the information altogether or refer to that information instead of preparing a separate SEEP document containing it.

Third, Baron contends that the SEEP specifications document contains various organizational and other problems that should be clarified.[42] Baron states that, for example, "requirements relating to erosion and sediment control … are addressed in multiple places …, significantly complicating efforts to determine the Applicant's compliance filings" and that "requirements related to drawings are found throughout the document rather than being confined" to one section.[43] In an effort to address its concerns, Baron attaches as Appendix B to its Brief on Exceptions a proposed SEEP specifications document that contains the Applicant's revisions.[44]

DPS Staff opposes Baron's request that the SEEP specifications document be designated as a guidance document because the SEEP specifications document establishes minimum requirements, not guidance, for information that must be included in SEEP compliance filings.[45] DPS Staff states that Baron had ample opportunity to engage in discussions with DPS Staff to customize the SEEP specifications document for this Project, but that Baron made no effort to do so.[46] DPS Staff maintains that the Siting Board should either adopt the SEEP specifications document attached to the RD or include a Certificate Condition requiring the Certificate holder to file a

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42 Baron's Brief on Exceptions, p. 9.

43 Baron's Brief on Exceptions, p. 9.

44 Baron's Brief on Exceptions, Appendix B.

45 DPS Staff's Brief on Exceptions, p. 2.

46 DPS Staff's Brief on Exceptions, p. 3.

SEEP specifications document either as a compliance filing with the Siting Board or Public Service Commission or as an information report with the Secretary for consideration by DPS Staff.

We agree with DPS Staff that the SEEP specifications document should not be treated as a guidance document, but rather should be adopted to establish minimum requirements for the SEEP compliance filings. Our adoption of the SEEP specifications will help to streamline the review of SEEP filings by ensuring that appropriate details are provided. Because the SEEP specifications document establishes minimum requirements for specified SEEP documents, specific Certificate Conditions may impose additional requirements. To the extent such requirements in the Certificate Conditions conflict with or require more information than required by the SEEP specifications, the Certificate Conditions will control. For example, to the extent that Certificate Condition 52(a)(ix) regarding wetlands requires more information than the SEEP specifications, Baron must comply with Certificate Condition 52(a)(ix).

Contrary to Baron's position, the adoption of the SEEP specifications document should not require Baron to provide unnecessary, burdensome or duplicative information. The SEEP specifications document itself allows Baron to identify any requirements that are inapplicable to the Project. To ensure that compliance filings are complete and to avoid any possible confusion by reference to documents filed at other stages of this proceeding, Baron shall include required information in the compliance filings even if Baron previously provided such information as part of its Article 10 Application.

Accordingly, we adopt Certificate Condition 52 and the SEEP specifications document attached hereto as Appendix B.

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

PSL §168(3)(a) and PSL §168(4) require that the Siting Board find 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 upon testimony by DPS Staff's Engineering and Policy Panels and Application Exhibit 10 of Hearing Exhibit 1, the Examiners found that the Facility will be a beneficial addition to the electric generation capacity of the State and is consistent with the State's energy policy and planning objectives.[47]

On exceptions, Intervenor Sokolow asserts that Baron has not proven that the Facility will provide a modest beneficial addition to the energy capacity of the State because, she maintains, in competing for placement on the grid, the Facility will displace other beneficial renewable energy. The record does not support Intervenor Sokolow's position. There is no evidence that the Facility will displace other beneficial renewable energy generators or that it will not provide a modest beneficial addition to the energy capacity of the State. To the contrary, the record supports the conclusion that "the Project will result in a modest beneficial addition of electric generation capacity in the State that will not displace other beneficial generation."[48]

In addition, we agree with the Examiners that the Facility is consistent with the State's energy policy and planning objectives. The 2015 State Energy Plan (SEP) and the Clean Energy Standard adopted by the Public Service Commission in PSC Case 15-E-0302 emphasize the importance of renewable

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47 RD, pp. 26-27.

48 3/20/19 Tr. 292.

electric generation, which will be provided by the Facility. As proposed, the energy from the Project would be delivered to New York customers for consumption.[49] Contrary to Intervenor Sokolow's statements in her Brief on Exceptions, the Facility also will serve the goals of improving fuel diversity, grid reliability, and modernization of grid infrastructure.[50] Fuel diversity will be improved through generation of electricity with wind power rather than with fossil fuels; grid reliability will be improved through additional generation of power from a separate site through a different energy source; and modernization of the grid will result from construction of a new electric generating facility.

D. Environmental Impacts – PSL §168(2) & §168(3)(c) and (e)

Pursuant to PSL §168(2), the Siting Board must make explicit findings regarding the probable environmental impacts from the construction and operation of a proposed facility, including impacts to (a) ecology, air, ground and surface water, wildlife, and habitat; (b) public health and safety; (c) cultural, historic, and recreational resources, including aesthetics and scenic values; and (d) transportation, communication, utilities and other infrastructure. Before an Article 10 certificate may be issued, PSL §168(3)(c) requires the Siting Board to determine that any adverse environmental impacts resulting from the construction and operation of the facility will be minimized or avoided to the maximum extent practicable. PSL §168(3)(e) requires the Siting Board to find that the facility is designed to operate in compliance with applicable State environmental, public health, and safety laws.

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[49] RD, p. 27; 3/20/19 Tr. 301; Hearing Exh. 1, Application Exh. 10, p. 9.

[50] Sokolow Brief on Exceptions, p. 6.

In making its findings, the Siting Board may impose, and monitor compliance with, any terms and conditions it deems necessary.

The following sections summarize the probable environmental impacts associated with the proposed Facility, as identified by the Examiners. In addition, these sections include the Examiners' recommendations regarding the Siting Board's required findings, the objections, if any, to the Examiners' recommendations, and our findings and determinations with respect to the environmental impacts that have been identified.

1. Ecology

a. Invasive Species

Environmental Conservation Law (ECL) Article 9, Title 17, requires that projects subject to State review be examined for any risks posed to the State's environment by invasive species, and that wherever practical, invasive species be prohibited and actively eliminated at project sites regulated by the State.[51]

The Applicant conducted field studies to document the presence and extent of invasive species, and provided a baseline survey report as well as an Invasive Species Control Plan (ISCP).[52] One of the invasive species identified, the golden nematode (GN), was of particular concern to DAM Staff.[53] GN is one of the most damaging crop pests, and because one of the turbine sites was located on a quarantined and regulated field, Baron agreed to remove that turbine from the Project and to relocate all other proposed facilities outside the quarantined

[51] ECL §§9-1701, 9-1709(2)(b)(iv).

[52] RD, p. 31.

[53] RD, p. 31.

area.[54] Baron also agreed to provide an updated baseline survey report, and to submit the ISCP as a compliance filing.[55]

In its closing brief, DEC Staff proposed a Certificate Condition that detailed the contents of the final ISCP. The Applicant objected to the proposed Condition and indicated that it would agree to a Condition requiring preparation of an ISCP identical to that approved by DPS Staff for the Cassadaga Wind project as a compliance filing. The Examiners resolved the dispute between DEC Staff and the Applicant concerning the level of detail to be included in the final ISCP by proposing modified Certificate Condition 52(a)(iv).[56] Based on the modified condition, the Examiners recommended that the Board determine that the impacts related to invasive species have been minimized to the maximum extent practicable, and that to the extent practicable, the Applicant will prohibit and actively eliminate invasive species at the Facility, in compliance with State environmental law.[57]

In her Brief on Exceptions, Intervenor Sokolow argues that the more stringent conditions proposed by DEC Staff should be adopted, rather than the Cassadaga conditions, due to introduction of the spotted lantern, and because “agriculture crop production in Steuben is #1 for NYS and NYS should protect our food resource assets.”[58] Intervenor Sokolow contends that the Siting Board should be concerned with the lack of identification of the GN under Baron’s review, “as well as the negative attitude toward curtailment for protection of bats,”

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54 RD, p. 31.

55 RD, p. 32.

56 RD, pp. 32-34 and Appendix A, Proposed Certificate Condition 52(a)(iv).

57 RD, p. 34.

58 Sokolow’s Brief on Exceptions, p. 7.

and maintains that all new projects in the agricultural community should be required to comply with the same updated ISCP to protect New York State's crops.[59]

Intervenor Sokolow did not provide expert testimony or other evidence to support the exceptions that she raised. Rather, the exceptions are general statements, advanced without reference to the record, and as such, do not provide a basis for rejecting the Examiners' conclusions. No parties other than Intervenor Sokolow raised exceptions to the Examiners' conclusions and recommendations on the Project's compliance with State law governing invasive species.

We adopt the Examiners' conclusions and recommendations. Based upon the record of the proceeding and Certificate Condition 52(a)(iv) and other relevant Conditions, we conclude that with respect to invasive species, the Project is designed to operate in compliance with applicable State environmental laws, and that the adverse environmental effects of the construction and operation of the Project with respect to invasive species will be minimized or avoided to the maximum extent practicable.[60]

b. Plants and Forests

The Examiners found that the Project would result in impacts to plant communities, including disturbance and clearing of vegetation, as well as permanent loss of habitat by conversion to built facilities.[61] Less than 7% of the site will be disturbed during construction, and approximately 120.1 acres

[59] Sokolow's Brief on Exceptions, p. 7.

[60] PSL §168(3)(c) and (e).

[61] RD, p. 35.

(1.4% of the Facility site) will be permanently converted to built facilities.[62]

The Examiners noted that the percentage of disturbed forest land is low, relative to the total amount of forested land at the Facility site.[63] Approximately 27.2 acres of forest will be converted to built facilities, 89.7 acres will be converted to a different ecological community by clearing and maintaining the acreage as successional communities during the life of the Project, and 19.4 acres will be temporarily disturbed and allowed to regrow following completion of construction.[64] With respect to forest fragmentation, the application indicated that it was unlikely that the Project would pose a significant risk of habitat fragmentation to bird communities or grasslands.[65] No threatened or endangered plant candidate, rare plant species or significant ecological communities were identified at the Facility site, and no plant community will be extirpated or significantly reduced.[66] Certificate Condition 67 requires preparation of a long-range Facility and Corridors Management Plan.[67]

Based on the record, the Examiners recommended that the Siting Board determine that the Project's impacts to plant and forest ecology have been minimized or avoided to the maximum extent practicable.[68] No party raised exceptions to the Examiners' findings and recommendations regarding impacts to

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62 RD, p. 35.

63 RD, pp. 35-36.

64 RD, p. 35.

65 RD, p. 36.

66 RD, p. 36.

67 RD, pp. 36-37.

68 RD, p. 37.

plants and forests, and therefore we adopt those findings and recommendations.

c. Agricultural Land

The Examiners noted that approximately 75% of the Facility site is enrolled in a State Certified Agricultural District.[69] As proposed, the Project will result in temporary impacts to approximately 102.2 acres, with an additional 256.9 acres permanently affected.[70] DAM Staff raised issues with respect to agricultural land in prefiled testimony, and those concerns were resolved by Baron's rebuttal testimony.[71] The Applicant agreed to implement mitigation measures to protect and restore agricultural soils during and after construction, and relocated certain project components to avoid interfering with agricultural activities.[72] In addition, Baron agreed to Certificate Condition 78, which would require Baron to employ a full-time agricultural monitor.[73]

Based upon the proposed Certificate Conditions agreed to by DAM Staff and Baron, the Examiners recommended that the Board determine that the impacts to agricultural land have been minimized or avoided to the maximum extent practicable.[74]

In her Brief on Exceptions, Intervenor Sokolow agrees generally with the Examiners' conclusions, but asserts that the monitor's professional degree should be approved by all agencies; areas monitored should be feasible for one person to monitor ("295 acres spread over the project area of multiple

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69 RD, p. 37.

70 RD, p. 37.

71 RD, pp. 37-39.

72 RD, pp. 37-38.

73 RD, pp. 38-39.

74 RD, p. 39.

towns is NOT feasible for one person to monitor"); and "[t]here needs to be documentation by the monitor with time and place recorded."[75]

The Certificate Conditions agreed to by Baron and DAM Staff address the exceptions raised by Intervenor Sokolow.[76] No other parties raised exceptions to the Examiners' conclusions and recommendations concerning the Project's impacts on agricultural land. Consistent with the Examiners' recommendation, we conclude that impacts to agricultural land have been minimized or avoided to the maximum extent practicable.

2. Air

ECL Article 19 and Parts 200 *et seq.* of 6 NYCRR establish air quality standards for the State and an air pollution control permitting system for certain pollutants.[77] Once constructed, the Facility will not generate air emissions. As a result, the Facility does not require any air pollution control permits or registrations.[78] During construction, temporary emission sources (including an on-site concrete batch plant and one or more fossil-fuel fired generators) may be used, but those will operate on a limited basis.[79] Any fugitive dust emissions from earthmoving activities and travel on unpaved roads would be short-term and localized, and would be addressed promptly consistent with DEC's *Standards and Specifications for Erosion Control*.[80] Adverse impacts to air quality are therefore not anticipated.

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75 Sokolow's Brief on Exceptions, p. 8.

76 See Certificate Conditions 78-81 (Appendix A).

77 RD, p. 40.

78 RD, p. 39.

79 RD, p. 39.

80 RD, pp. 39-40.

Based on the record, the Examiners recommended that the Siting Board determine that the Project's impacts to air quality have been minimized or avoided to the maximum extent practicable.[81] The Examiners also noted that because the Facility has no potential to emit regulated air pollutants, an approval pursuant to ECL Article 19 is not required.[82]

In her Brief on Exceptions, Intervenor Sokolow states that intervenors "raised the difference in reporting of emissions from Baron Winds and NYSERDA's requirement for Offshore."[83] She asserts that the Offshore report was thorough, and that the Applicant stated that any emissions due to construction would be handled in the Road Use Agreement. She contends that "[s]ince the road use agreement is required for Article 10, than [sic] the expectation was that it would be reviewed there."[84] She suggests that all road use agreements be included in the application "for further discussion and compliance."[85]

In its Brief Opposing Exceptions, the Applicant stated that while the Applicant took exception to Intervenor Sokolow's arguments, "the Applicant will not reiterate arguments already made in response to exceptions raised by Sokolow" and incorporated those arguments by reference. No other party responded to Intervenor Sokolow's contentions with respect to air emissions.

No other party raised exceptions to the Examiners' conclusions and recommendation concerning the Project's impact

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81 RD, p. 40.

82 RD, p. 39, n. 95.

83 Sokolow's Brief on Exceptions, p. 8.

84 Sokolow's Brief on Exceptions, p. 8.

85 Sokolow's Brief on Exceptions, p. 8.

on air resources. In her Brief on Exceptions, Intervenor Sokolow does not provide record support for her assertions, which are more in the nature of comments on the application. Moreover, Intervenor Sokolow's submissions, including prefiled testimony in this proceeding, did not include evidence by a competent witness with respect to air impacts, and instead consist of "Emails from experts in wind energy on certification requirements and proper siting and safety."[86] Accordingly, we adopt the Examiners' recommendations, and determine that the Project's impacts to air quality have been minimized or avoided to the maximum extent practicable. We find further that the Project is designed to operate in compliance with the State's air pollution control laws and regulations.

3. Ground and Surface Water Resources

a. Groundwater, Including Water Supply Wells

ECL Article 17 and 6 NYCRR Parts 700 *et seq.* establish the State's water quality standards. The Examiners determined that the Project is not expected to result in significant impacts to groundwater quality or quantity, or to any drinking water supplies.[87] The northern portion of the Project site overlays part of one primary aquifer, and portions of seven DEC-mapped unconsolidated aquifers, but the nearest sole-source aquifer is located 44 miles to the west.[88] No public drinking water supplies are located within one mile or less of a Facility component.[89]

Before commencing construction activity, Baron must obtain coverage under DEC's State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater

86 3/20/19 Tr. 507.

87 RD, p. 43.

88 RD, p. 42.

89 RD, p. 42.

Discharges from Construction Activity (General Permit). To obtain coverage, Baron submitted a preliminary Stormwater Pollution Prevention and Control Plan (SWPPP) with its application. Baron will finalize the SWPPP and submit it to DEC, together with a Notice of Intent (NOI) to seek coverage under the General Permit. Short-term impacts to groundwater during construction will be insignificant or avoided altogether by adherence to the SWPPP and the Spill Prevention, Control and Countermeasure (SPCC) Plan.

Based on the record, the Examiners recommended that the Siting Board determine that impacts to groundwater and water supply wells have been minimized or avoided to the maximum extent practicable, and that the Project will be constructed and operated in compliance with State water pollution control laws.[90]

In her Brief on Exceptions, Intervenor Sokolow states that she would like assurances that the SPDES permit reflects the new Project area after the November 23, 2016 application update. She also raises objections to the waiver of the Town of Fremont's well testing requirements, arguing that the Applicant promised at a "board meeting" in March 2019 that it would honor Fremont's law.[91] Intervenor Sokolow also disagrees with the Examiners' conclusion that impacts to groundwater or drinking water have been minimized to the maximum extent practicable, but does not explain the basis for her disagreement.

In its Brief on Exceptions, the Town of Fremont indicates that it is in general agreement with the RD, but not the recommendation that the Siting Board waive a provision in

[90] RD, pp. 43-44.

[91] Sokolow's Brief on Exceptions, p. 11.

the Town's Local Law No. 2 of 2018, which would require Baron to offer groundwater well testing out to 3,500 feet from turbines.[92]

No other party raised exceptions to the Examiners' conclusions and recommendations with respect to the Project's potential impact to groundwater quality or quantity, or to any drinking water supplies. We agree with Intervenor Sokolow that the SPDES General Permit should accurately reflect the Project area, as currently defined, but note that the SPDES General Permit, by its terms, is applicable at any location where construction takes place in the Project area. The remainder of Intervenor Sokolow's statements with respect to groundwater lack specificity, or support in the record of this proceeding. Other than reiterating its objection to the waiver of Local Law No. 2, the Town of Fremont does not provide any additional support for its argument beyond that which is already in the record. We therefore adopt the Examiners' recommendations and conclusions. Based upon the record, and the proposed Certificate Conditions (Appendix A), we conclude that with respect to groundwater, the Project is designed to operate in compliance with the State's water pollution control laws, and that the adverse environmental effects of the construction and operation of the Project on groundwater will be minimized or avoided to the maximum extent practicable.

b. Section 401 Water Quality Certification

The Project will require a water quality certification (WQC) pursuant to Section 401 of the federal Clean Water Act.[93] Section 1000.8 of 16 NYCRR provides that WQCs for Article 10 projects are issued by the Siting Board. To obtain a WQC, an applicant must demonstrate compliance with New York State

[92] Fremont's Brief on Exceptions, p. 6.

[93] 6 NYCRR Section 608.9(a).

effluent limits and standards, State water quality standards and thermal discharge criteria, State prohibited discharges, and other New York State regulations and criteria, as applicable.[94]

Baron and DPS Staff had agreed to a Certificate Condition requiring Baron to file an application for a WQC with the Siting Board prior to construction of the facility, concurrent with the permit application filed with the U.S. Army Corps of Engineers for wetlands impacts. Baron filed this certification application on April 8 and 9, 2019, which will be reviewed under Section 1000.8 of 16 NYCRR.

In her Brief on Exceptions, Intervenor Sokolow states that "Baron Winds first filed a request for WQC with the USACE on April 8 and 9, 2019. If their start date ND timeframe were a concern and the USACE has months delay, than [sic] why did they apply so late?"[95]

No other parties raised exceptions regarding the Applicant's WQC application. Intervenor Sokolow's statement amounts to a rhetorical question and, thus, does not provide a basis for rejecting the certification application.

4. Surface Water, Freshwater Wetlands, and Streams

ECL Article 24 and DEC's regulations at 6 NYCRR Parts 663 and 664 govern the disturbance of freshwater wetlands and their adjacent areas. State laws governing the disturbance of protected streams are found in ECL Article 15 and DEC's regulations at 6 NYCRR Part 608. In general, State protected wetlands and adjacent areas and protected streams may not be disturbed without approval from the State.[96] Further, as noted

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[94] State standards are set forth in Parts 701-704 and applicable provisions of Part 750 of 6 NYCRR.

[95] Sokolow's Brief on Exceptions, p. 11.

[96] ECL §24-0701; ECL §15-0501; ECL §15-0505.

above, the Applicant is required to obtain coverage under DEC's General Permit to protect surface waters from the discharge of pollutants.

a. Wetlands

The Examiners noted that three State-regulated freshwater wetlands (HK-3, HK-4 and HK-8) were identified within the Project study area.[97] The Project, as proposed, will not result in impacts to Freshwater Wetlands HK-8 or HK-4.[98] Impacts to HK-3 would potentially include the installation of underground electrical connection lines within the boundaries of the wetland.[99] The collection lines would run between turbines T81 and T46.[100] The application update indicated that no direct impacts to the wetland were anticipated during construction or operation, and that horizontal directional drilling would be used to avoid such impacts.[101] Permanent forest conversion of 0.07 acre of HK-3 wetland adjacent area would result if the collection line were routed through HK-3.[102]

An alternative route, which would avoid crossing Freshwater Wetland HK-3, would route the collection lines from turbine T78 northeast to the collection station.[103] The parties disputed whether Baron agreed to the alternative. Accordingly, DEC Staff recommended a set of Certificate Conditions that would require the submission in compliance filings of various plans to address construction-related impacts to State-regulated

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97 RD, p. 46.

98 RD, p. 46.

99 RD, p. 46.

100 RD, p. 46.

101 RD, pp. 46-47.

102 RD, p. 47.

103 RD, p. 47.

freshwater wetlands in the event Baron chooses to route the collection line through the regulated wetland.[104] DEC Staff also proposed Certificate Conditions establishing requirements for construction activities and post-construction wetland restoration.[105]

In response, Baron and DPS Staff, who had largely agreed on an alternative set of Certification Conditions, objected to DEC Staff's proposed Conditions as unnecessary, duplicative, or unduly burdensome. Although DEC Staff took issue with whether its more stringent Conditions were duplicative, DEC Staff ultimately accepted DPS Staff's proposal to resolve the issue through the process proposed for post-Certificate development of the SEEP Specification document.[106]

The Examiners recommended that if the Applicant elects to route the collection line through Freshwater Wetland HK-3, rather than the alternative route, the SEEP or equivalent document filed as a compliance filing should include DEC Staff's proposed site-specific plans and specifications detailed in the State-regulated wetland-related Certificate Conditions.[107] In addition, the Examiners recommended that, in the event of permanent impacts to federal and State-regulated wetlands, the Applicant should be required to implement a Final Wetlands Mitigation Plan, and possibly a Wetland Mitigation Remediation Plan.[108]

In its Brief on Exceptions, Baron raises several concerns with the Examiners' recommendation that DEC Staff's

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104 RD, p. 48; see also DEC Staff's Initial Brief, Appendix A.

105 DEC Staff's Initial Brief, Appendix A.

106 DEC Staff's Reply Brief, pp. 3-4.

107 RD, pp. 49-50.

108 RD, p. 50; RD Proposed Certificate Conditions 65 and 66.

proposed Certificate Conditions be considered during the development of the SEEP or equivalent documents,[109] and that if Baron routes the collection line through wetland HK-3, the SEEP or equivalent documents include the plans and other information DEC Staff's proposed site-specific conditions require.[110] First, as noted above, Baron argues that the recommendation that DEC Staff's wetland-specific conditions be incorporated into the SEEP appears to contradict the apparent mandate that the Applicant comply with the SEEP Specifications document (Appendix B to the RD), which does not include the additional wetland conditions.[111]

In response, DEC Staff maintains that the Applicant's argument as to the finality or completeness of the SEEP Specifications "confuses a simple premise; i.e., the SEEP submissions must adhere to DEC Staff's wetland conditions, as well as the SEEP specifications document, to facilitate rapid advancement of the project in compliance with applicable law."[112] DEC Staff observes that "the SEEP specifications document is not a standalone compliance filing, but rather a 'framework' containing the 'minimum requirements' for SEEP-related compliance filings."[113] DEC Staff points out that the proposed wetland conditions are the criteria that will be applied in reviewing SEEP-related compliance filings, in the event that the alternative route proves impractical. DEC Staff goes on to note that the Applicant has not identified "a single instance in

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109 RD, p. 49.

110 RD, p. 50. Baron notes that additional investigation is necessary before a final route for the turbine T78 collection lines can be selected. Baron's Brief on Exceptions, p. 11.

111 Baron's Brief on Exceptions, p. 7.

112 DEC Staff's Brief Opposing Exceptions, p. 5.

113 DEC Staff's Brief Opposing Exceptions, pp. 5-6; RD, p. 25.

which adherence to both the SEEP Specifications document and the DEC Staff's proposed wetland conditions are mutually exclusive."[114] According to DEC Staff, compliance with both the SEEP Specifications and the wetland conditions will reduce the potential areas of disagreement, resulting in the project moving more quickly towards construction.

Second, Baron maintains that the RD provided no grounds for Baron to comply with the more stringent conditions; both the Applicant and DPS Staff opposed the conditions as duplicative and unnecessary. Baron asserts that DEC Staff does not explain why the conditions are necessary, particularly in light of the small amount of regulated wetlands on the site, and "the extremely small" section of State-regulated wetland adjacent area potentially affected.[115] Accordingly, Baron proposes to strike in its entirety proposed Certificate Condition 52(a)(ix).[116] DEC Staff counters that the Applicant has not committed to utilizing the alternative route that would avoid crossing Freshwater Wetland HK-3, and that more stringent conditions are necessary, given that uncertainty, to ensure that the State-related resource is protected in accordance with ECL Article 24 and its implementing regulations.

Baron agrees with the Examiners' recommendation that the Applicant implement a Final Wetlands Mitigation Plan in the event of permanent impacts to federal and State wetlands, as well as a possible Wetland Mitigation Remedial Plan, "subject to the changes set forth in Appendix A, Certificate Condition 65."[117] The changes advanced by Baron clarify that the Applicant

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[114] DEC Staff's Brief Opposing Exceptions, p. 6.

[115] Baron's Brief on Exceptions, p. 12.

[116] Baron's Brief on Exceptions, Appendix A, pp. 12-13.

[117] Baron's Brief on Exceptions, p. 12.

must submit a Wetlands Mitigation Plan only if the extent of wetland impacts justify preparation of such a plan, and that the plan provide for State-regulated wetland mitigation in the same watershed to the maximum extent practicable. Baron states that this change is required to clarify that the same watershed restriction is applicable only to State-regulated wetlands, since DEC does not have authority over federally regulated wetlands.

DEC Staff states that it has no objection to the clarification, but does not agree with limiting the use of biodegradable drilling solutions only to those crossings of State-protected surface waters.[118] According to DEC Staff, "the Applicant should always be using biodegradable drilling solutions to protect water quality of surface and ground water."[119]

The RD recommended that the Applicant be required to submit additional details regarding wetland impacts "for review by DEC prior to filing as a compliance filing."[120] Baron argues that this requirement would add a layer of review not intended by Article 10; according to the Applicant, DEC Staff has the opportunity to comment on compliance filings in the same manner as any other party within the 21-day comment period, and allowing DEC Staff a "unique role" in reviewing plans prior to public filing as a compliance filing is not supported by the Article 10 statute or regulations. Baron argues further that the proposed Certificate Condition does not specify a limit on the length of time DEC Staff would have for its review, prior to filing with the Secretary. The Applicant argues that this would

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[118] See Baron's Brief on Exceptions, Appendix B, SEEP Specification (B)(7)(a), p. 15.

[119] DEC Staff's Brief Opposing Exceptions, p. 8.

[120] RD Proposed Certificate Condition 52(a)(ix).

potentially create "long, protracted timeframes for review of information that is not necessary to be submitted to DEC in advance."[121] Baron requests that even if the proposed conditions are adopted, the requirement for DEC Staff review prior to submission of the compliance filing be removed.

DEC Staff responds that it understands this concern, and suggests that DEC Staff be given at least 14 days to review this documentation prior to submission as a compliance filing. According to DEC Staff, such review "will allow DEC Staff to provide comments to the Applicant to improve the documents, if necessary"[122] and allow the submissions to be more readily approvable once filed. DEC Staff notes that, in its experience, "such a review is a time saving practice that results in better outcomes."[123]

Baron's exceptions are granted in part, and otherwise overruled. In the event the Applicant chooses to cross State-regulated Freshwater Wetland HK-3, the Siting Board will be required to determine not only that impacts to those wetlands have been avoided or minimized to the maximum extent practicable (see PSL §168[3][c]),[124] but also that activities conducted in the State-regulated wetland comply with State permitting standards under ECL Article 24 and its implementing regulations (see PSL §168[3][e]). The plans, specifications, and information detailed in DEC Staff's proposed State-regulated wetland-related Certificate Conditions will provide information necessary to evaluate whether the Project meets ECL Article 24 permitting standards. This is in addition to the information on

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121 Baron's Brief on Exceptions, p. 13.

122 DEC Staff's Brief Opposing Exceptions, p. 8.

123 DEC Staff's Brief Opposing Exceptions, p. 8.

124 This finding is required for all wetlands, whether State-regulated or otherwise.

wetland impacts provided pursuant to the SEEP Specifications, which as we have concluded above establish only minimum requirements. This information is also in addition to the information required pursuant to other wetland-related Certificate Conditions that apply to wetlands generally, whether State-regulated or otherwise. Accordingly, in the event Baron elects to cross Freshwater Wetland HK-3, Baron's compliance filing, whether in the SEEP, a final Wetlands Mitigation Plan, or equivalent document, should include the information specified in DEC Staff's proposed Certification Conditions, the SEEP Specifications, and other wetland-related Conditions.[125]

Finally, Conditions governing construction activities and wetland restoration are necessary to assure that those activities comply with ECL Article 24 and that impacts to wetlands from those activities are avoided or mitigated to the maximum extent practicable.

With respect to Baron's exception to DEC Staff's prior review of the compliance filings, to the extent the Conditions suggest prior approval, we accept Baron's exception. However, prior consultation with DEC Staff during the development of the compliance filings will aid in assuring that activities in State-regulated wetlands and their adjacent areas are conducted in compliance with applicable State freshwater wetland protection laws. Accordingly, Baron, in consultation with DEC Staff, will develop the compliance filings, including the necessary, site-specific analysis of impacts to State-regulated wetland HK-3, and avoidance and mitigation measures related to that wetland, as required by law and set forth in the RD.

[125] Because we are not requiring post-Certificate development of the SEEP Specifications document, DEC Staff's proposed additional State-regulated wetland conditions are included in the attached Certificate Conditions.

Finally, Certificate Condition 65 is revised in accordance with the Applicant's requested clarification, with the exception that, as DEC Staff requested, the SEEP Specifications are modified to require use of biodegradable drilling solutions wherever technically practicable. See Certificate Conditions 65 and SEEP Specification (B)(7)(a).

With the above clarifications and wetland-related Certificate Conditions, we find that adverse environmental impacts to wetlands and wetland adjacent areas have been avoided, or if unavoidable, mitigated to the maximum extent practicable. We also conclude that the Project will be constructed and operated in compliance with State freshwater wetland protection laws and regulations.

b. Streams

The Examiners noted that total stream impacts associated with the Project are low, given its size and generating capacity.[126] Nevertheless, DEC Staff raised concerns regarding a stream (Stream PA-3-57-5-49-9-2) that was not delineated or mapped by Baron in its application.[127] The stream in question is classified as "A" and is protected pursuant to the State's Protection of Waters program (ECL Article 15, Title 5), and may not be disturbed without a permit.[128] For Article 10 applications, the Siting Board issues the permit in the form of certificate conditions.[129]

According to DEC Staff, the stream is in the vicinity of an access road, between turbines 76 and 87, and will be impacted by the access road and electrical connection lines

[126] RD, pp. 52-53.

[127] RD, pp. 50-51.

[128] RD, p. 51.

[129] PSL §168(2).

between the turbines.[130] DEC Staff proposed a Certificate Condition to assure that construction of the access road and connection lines complies with stream protection permitting standards.[131] Baron disputed that the stream exists, but nevertheless proposed its own Certificate Condition that would include implementation of appropriate stormwater controls and a 10-foot grass filter strip between the access road and the stream.[132] In addition, the access road would be designed so that water will pass over or through the road without creating any upslope ponding.[133] In post-hearing briefing, DPS Staff argued that the proposed Certificate Condition was unnecessary, and the Applicant supported DPS Staff.[134] DEC Staff disagreed with DPS Staff and Baron's position with respect to this issue, contending that its proposed Condition was necessary to ensure protection of important downstream habitat.[135]

The Examiners recommended that DEC Staff's proposed Certificate Condition be adopted.[136] With the addition of a Certificate Condition regarding the design of the access road between turbines 76 and 87, the Examiners recommended that the Siting Board determine that the Applicant has avoided, minimized, and mitigated stream impacts to the maximum extent practicable. The Examiners also concluded that the Project

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130 RD, p. 51.

131 RD, p. 51; see also DEC Staff's Initial Brief, p. 16 and Appendix B, p. 6 (Condition 4).

132 RD, pp. 51-52.

133 RD, p. 52.

134 RD, p. 52.

135 RD, p. 52.

136 RD, pp. 52-53; see DEC Staff's Initial Brief, Appendix B, p. 6 (Condition 4).

complies with New York State stream protection laws and regulations.

In her Brief on Exceptions, Intervenor Sokolow contends that the investigation of wetlands and streams by Baron's consultant, EDR, in the summer of 2016 occurred prior to the Town of Fremont's "significant inclusion in the Project" and only included Hartsville and Hornellsville instead.[137] Intervenor Sokolow asserts that the following "has not been included in the discussion and needs to be mitigates [sic] to the maximum extent practicable: (1) Fremont's Comprehensive plan and focus on groundwater[;] (2) The artesian wells that are utilized in Fremont and were not addressed when raised by Mr. Flansburg at Board Meetings and the Evidentiary Hearing[; and] (3) the fact that Hornell, the EJ area, owns many of the acres in Fremont surrounding the reservoir."[138]

No other party raised exceptions to the Examiners' conclusions and recommendations regarding impacts to streams and other surface waters. While the Town of Fremont did raise an exception with respect to impacts to groundwater and the proposed waiver of the Town's Local Law No. 2, as discussed above, the Town did not address impacts to wetlands and streams. Intervenor Sokolow's objections are broad statements of concerns or mere observations that were not shared by the Town, and under the circumstances, do not provide a basis for rejecting the Examiners' conclusions, particularly since Intervenor Sokolow does not address or even discuss impacts to the protected stream, which was the specific issue that formed the basis for the Examiners' recommendations.

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[137] Sokolow's Brief on Exceptions, pp. 11-12.

[138] Sokolow's Brief on Exceptions, p. 12.

We determine that the addition of DEC Staff's proposed Certificate Condition regarding the design of the access road between turbines 76 and 87, and the requirement addressed above concerning the use of biodegradable drilling fluid for all waterbody crossings wherever technically practicable, are necessary to conclude that the Project will comply with New York State stream protection laws and regulations, and State water quality and water pollution control laws.

Finally, we note that in its Post-Hearing Initial Brief, DEC Staff proposed additional conditions to address potential impacts to streams regulated pursuant to ECL Article 15 and 6 NYCRR Part 608. Baron raised an objection similar to that raised with respect to DEC Staff's proposed wetland-related conditions – whether (1) to implement the condition proposed by DEC Staff or the ones DPS Staff and Baron proposed, and (2) additional reviews (including approval of a SEEP Specifications document or other agency approvals) are necessary before the Applicant can submit its compliance filings.[139] The Examiners, however, made no express recommendations with respect to these issues.

As with DEC Staff's proposed wetland-related Conditions, we conclude that the conditions DEC Staff recommended with respect to State-regulated streams are necessary to assure that activities impacting those streams comply with ECL Article 15 and its implementing regulations. However, with respect to compliance filings related to State-regulated streams, those filings will not be subject to prior approval by DEC. Instead, compliance filings should be developed in consultation with DEC Staff.

[139] Applicant's Reply Brief, pp. 10-11.

With the addition of the proposed Certification Conditions, as so modified, we conclude that the Applicant has avoided, minimized and mitigated impacts to streams to the maximum extent practicable, and that the Project will be constructed in compliance with the State's stream protection, water quality, and water pollution control laws.

5. Wildlife and Habitat

a. Wildlife Other Than Bats and Bald Eagles; Habitat

The Examiners recommended that we conclude that, except for impacts to bats and bald eagles, construction and operation of the Facility would not result in significant impacts to wildlife.[140] Any impacts would be limited to incidental injury or mortality because of construction activity, habitat disturbance or loss and displacement associated with clearing and earth-moving activities, and wildlife displacement due to noise and human activity.[141]

The Project as constructed will result in some loss to wildlife habitat, with a total of 120.1 acres being permanently converted to built facilities, which represents 1.44% of the total site.[142] Approximately 80% of that loss would occur in row and field crops, which have limited value as wildlife habitat, and 89.7 acres would be converted to a successional community during the life of the Facility.[143]

Once the Facility is constructed, bird-related impacts will include direct habitat loss, habitat degradation from forest fragmentation, disturbance or displacement due to the presence of wind turbines, and avian mortality as a result of

[140] RD, p. 56.

[141] RD, p. 53.

[142] RD, p. 55.

[143] RD, p. 55.

collisions with turbines.[144] Fatalities are not anticipated to have population-level effects upon bird species, or to reduce numbers below levels necessary to maintain viability at local or regional levels.[145] The application did not identify any wildlife travel corridors within or adjacent to the Facility, and no impacts to such corridors, or any impacts to interior forest corridors, were expected to occur.[146]

Baron agreed to Certificate Conditions, including development of a final Bird and Bat Conservation Strategy, development of a Post-Construction Avian and Bat Monitoring and Adaptive Management Plan, and required reporting of the discovery of the active nest of any federally or State-listed threatened or endangered bird species, with implementation of a posted area.[147]

In her Brief on Exceptions, Intervenor Sokolow takes issue with the RD's assertion that no party contested Baron's analysis regarding impacts to wildlife and wildlife habitat, except for bald eagles and bats.[148] Intervenor Sokolow states that she raised issues relating to wildlife other than bats and eagles at the January 12, 2018 procedural conference, including impacts to the timber rattlesnake, and referred to DEC and US Fish & Wildlife Service lists in other windfarms. Intervenor Sokolow maintains that "[s]ince NY DEC and FWS were actively involved with all the existing windfarm impacts upon wildlife, Sokolow, et al's expectation were [sic] that the NY DEC and FWS's recommendations would be honored studies from the impacted

144 RD, p. 54.

145 RD, p. 55.

146 RD, p. 56.

147 RD, p. 55.

148 Sokolow's Brief on Exceptions, p. 11.

area would weigh more heavily than statewide studies."[149] She goes on to state that "[t]he Endangered Short Eared Owl (Id 364) was raised on 3/13/19 after the article in the Spectator," and that "Sokolow has continued to provide the FWS the same information as reported to the NY DEC."[150]

No other party raised exceptions, and the exceptions advanced by Intervenor Sokolow are not supported by expert testimony or other evidence in the record. Because of the lack of record support, the assertions and commentary in Intervenor Sokolow's Brief on Exceptions are speculative, and do not provide a basis for modifying or rejecting the Examiners' conclusions and recommendations.

We conclude that, apart from impacts to bats and bald eagles as discussed below, the potential adverse impacts to wildlife and habitat from the Facility's construction and operation have been minimized or avoided to the maximum extent practicable.

b. Bats

Section 1001.22(h) of 16 NYCRR requires an applicant to identify and evaluate the Project's expected impacts on bat species and habitats. The application must include a plan to avoid such impacts, or if unavoidable, to minimize and mitigate impacts during construction and operation of the Project, based upon existing information. Before granting an Article 10 Certificate, the Board must determine that any adverse environmental effects of the construction and operation of the facility on bats and their habitat will be minimized or avoided to the maximum extent practicable, and that the facility is designed to operate in compliance with applicable State law

[149] Sokolow's Brief on Exceptions, p. 11.

[150] Sokolow's Brief on Exceptions, p. 12.

protecting threatened or endangered bat species, namely the State Endangered Species Act (ECL §11-0535) and its implementing regulations at 6 NYCRR Part 182 (PSL §168[3][c] and [e]).

The Examiners determined that impacts to bats during Project operation were significant because wind turbines are the single greatest known source of mortality for several bat species in North America.[151] The Project is expected to impact the northern long eared bat (NLEB) and migratory tree bats, such as the eastern red bat, the hoary bat, and the silver-haired bat.[152] The NLEB is a federally listed threatened species,[153] and all bat species resident in New York, except the big brown bat, are considered Species of Greatest Conservation Need.[154] DEC Staff investigations revealed potential direct and indirect

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151 RD, p. 57.

152 RD, pp. 57, 62.

153 RD, p. 57. A threatened species is "any species that (1) are native species likely to become an endangered species within the foreseeable future in New York based upon the criteria for listing in section 182.3(b) of this Part and that are listed as threatened in section 182.5(b) of this Part; or (2) are species listed as threatened by the United States Department of the Interior in the Code of Federal Regulations (50 CFR Part 17)." 6 NYCRR §182.2(y).

The NLEB is a federally listed threatened species by the United States Department of the Interior in 50 CFR §17.11(h) and §17.40(o). Accordingly, the NLEB is also a State-listed threatened species pursuant to 6 NYCRR §182.2(y)(2) and §182.5(b).

154 RD, p. 62. "Species of Greatest Conservation Need" are species that experience some level of population decline, have identified threats that may put them in jeopardy, and need conservation actions to maintain stable population levels or sustain recovery. DEC, New York State Wildlife Action Plan, p. 7 (2015), available at http://www.dec.ny.gov/docs/wildlife_pdf/swapfinaldraft2015.pdf (last accessed June 4, 2019).

impacts to NLEB.[155] Direct impacts included killing or injuring NLEBs during construction and operation, and indirect impacts included modification of habitat.[156]

ECL §11-0535 prohibits, among other things, the "taking"[157] of any threatened or endangered species except under license or permit from the State. Under 6 NYCRR §182.11, an incidental take permit is required "for any activity that is likely to result in the take or taking" of any endangered or threatened species. To obtain an incidental take permit, an applicant must first avoid all impacts to listed species to the extent practicable. If full avoidance, which is one or fewer kills of a listed species every ten years, can be achieved, no further minimization or mitigation measures are required.[158]

If, however, an applicant can demonstrate that full avoidance is impracticable, 6 NYCRR §182.11(c) requires that the applicant prepare a net conservation benefit plan (NCBP) with minimization and mitigation measures that will result in a net conservation benefit to the species.[159]

The Parties agreed that the Project will likely result in a take of NLEB, but disagree over the number.[160] Without minimization measures, Baron estimated a take of 35.24 NLEB over

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155 RD, p. 58.

156 RD, p. 58.

157 "Taking" wildlife is defined to include killing or capturing wildlife, as well as all lesser acts such as disturbing, harrying, or worrying. See ECL §11-0103(13); 6 NYCRR §182.2(x).

158 Case 14-F-0490, Cassadaga Wind LLC, Order Granting Certificate of Environmental Compatibility and Public Need (issued January 17, 2018) (Cassadaga Wind Order), pp. 43, 52.

159 See Cassadaga Wind Order, p. 52.

160 RD, p. 58.

the 30-year life of the Project. DEC Staff estimated 196 NLEB.[161] With minimization measures, Baron estimated a take of 7.05 NLEB over the life of the Project, and DEC Staff estimated a take of 39.2 NLEB.[162] Both estimated the take of NLEB by multiplying the regional fatality rate by the corresponding species composition ratio for each species, then multiplying this product by the Project size, number of years, and an assumed adjustment factor for minimization.[163] However, for species composition, Baron used datasets of bat fatalities from wind energy projects across the Northeast, and DEC Staff used datasets only from New York State and Ontario.[164] Additionally, for Project size, Baron estimated by bats killed per turbine, and DEC Staff estimated by bats killed per megawatt (MW).[165]

With respect to species composition, Baron argued that a larger data set was appropriate because DEC Staff's smaller sample size of bat fatalities included "a notable outlier." Baron argued that mitigating for the higher estimate may result in over mitigation and unreasonable costs.[166] DEC Staff contended that Baron's use of a larger data set to determine bat fatalities diluted the New York data and that Baron's data was of questionable relevance.[167]

With respect to Project size, Baron argued that measuring bats killed per turbine is more appropriate than bats killed per MW because the MW metric overestimates the take of

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161 RD, p. 58.

162 RD, p. 58.

163 RD, p. 58.

164 RD, p. 59.

165 RD, pp. 58-59.

166 RD, p. 59.

167 RD, p. 60.

NLEBs.[168] Baron noted that most of the turbine area is well above ground level and poses little risk to NLEBs, which fly relatively close to the ground.[169] Additionally, Baron's proposed turbine increased in MW with a software upgrade, not a physical change, and the increased mortality DEC Staff would attribute to the higher MW would be illogical.[170] DEC Staff countered that the bats per-MW metric agrees with the best available data that larger turbines likely kill more bats because those turbines have a larger rotor swept zone.[171]

In light of the imprecise data available with respect to NLEBs, the Examiners recommended that the Siting Board adopt the smaller data set and the per MW methodology proposed by DEC Staff because both give a more appropriate, conservative approach to minimization measures.[172]

Curtailment

The Examiners noted that wind turbines are the greatest cause of mortality for the eastern red bat, the hoary bat, and the silver-haired bat.[173] The mortality effects are cumulative, occurring at a rate that may imperil the future of those species.[174]

The parties proposed a curtailment regime to minimize impacts to both the NLEB and migratory tree bats, but disagreed as to when the Project should curtail operation.[175] Baron

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168 RD, p. 61.

169 RD, p. 61.

170 RD, p. 61.

171 RD, pp. 60-61.

172 RD, pp. 60-62.

173 RD, p. 62.

174 RD, p. 62.

175 RD, pp. 62-63.

proposed a curtailment regime with a cut-in speed of 5.0 meters per second (m/s) 30 minutes before sunset to 30 minutes after sunrise daily from July 1 through September 30, when ambient temperatures are above 50 degrees Fahrenheit.[176] DPS Staff recommended a cut-in speed of 6.0 m/s 30 minutes before sunset to 30 minutes after sunrise daily from July 1 through October 1, when ambient temperatures are above 50 degrees Fahrenheit.[177] DEC Staff recommended a cut-in speed of 6.9 m/s, which DEC Staff contended was full avoidance for the NLEB.[178]

Baron estimated that its curtailment regime would reduce the risk of NLEB fatality by 80%, and all bat fatality by 50%.[179] According to Baron, increases in cut-in speed would provide proportionally less benefit to bats but a substantially higher cost in terms of energy loss.[180]

DPS Staff, on the other hand, argued that migratory bats fly at higher windspeeds and therefore face the highest rates of mortality. [181] Raising the cut-in speed to 6.0 m/s would lower bat mortality by 70%; and 6.9 m/s would lower bat mortality by 89%.[182] DPS Staff acknowledged that the Cassadaga Wind Order imposed a cut-in speed of 5.0 m/s but noted that the NCBP in that case did not assist in studying migratory tree bats, and thus was not relevant to those species.[183] In DPS Staff's view, a higher cut-in speed is justified to protect

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176 RD, p. 63.

177 RD, p. 63.

178 RD, pp. 63, 65.

179 RD, p. 63.

180 RD, pp. 63-64.

181 RD, p. 64.

182 RD, p. 64.

183 RD, p. 64.

migratory tree bat species from the threat of potentially unsustainable mortality rates.[184]

DEC Staff argued that if the 6.9 m/s cut-in speed is not adopted, full avoidance for the NLEB would not be achieved, and Baron failed to avoid or minimize the take of NLEB to the maximum extent practicable.[185] Accordingly, an NCBP would be required for the take of NLEB.[186] DEC Staff also emphasized that it would be legally and ecologically preferable for Baron to avoid the take of NLEB and other bat species by adopting the 6.9 m/s cut-in speed.[187]

Baron argued that adopting a cut-in speed above 5.0 m/s would be impracticable because it would put the Project's economic viability at risk.[188] DPS Staff responded that using a 6.0 m/s cut-in speed would only reduce Project revenues by 0.3% of those generated at Baron's proposed 5.0 m/s cut-in speed.[189] Additionally, the Cassadaga Wind Order indicated that future projects should include an economic evaluation of curtailment, which Baron failed to do.[190] DPS Staff argued that a curtailment speed below 6.0 m/s at the Project would result in less protection for bats in exchange for essentially no energy benefit toward New York State's Clean Energy Standard goals.[191] DEC Staff noted that it would be amenable to a lower cut-in

184 RD, pp. 64-65.

185 RD, p. 65.

186 RD, p. 65.

187 RD, p. 65.

188 RD, p. 65.

189 RD, p. 66.

190 RD, p. 66; Cassadaga Wind Order, p. 54, n. 96.

191 RD, p. 66.

speed if Baron could show that a speed above its proposed 5.0 m/s would be economically infeasible.[192]

The Examiners determined that Baron opened the door into an inquiry of the Project's economics when it claimed that measures advanced by other parties may render the Project economically infeasible.[193] The Examiners recommended that the Siting Board impose a curtailment speed between 6.0 m/s and 6.9 m/s to provide migratory tree bats with a greater level of protection.[194] If a curtailment speed below 6.9 m/s is imposed, the Examiners further recommended Certificate Conditions that would require an NCBP and other mitigation measures for the NLEB.[195]

Briefs on Exceptions and Briefs Opposing Exceptions

In its Brief on Exceptions, Baron, referencing the global extinction crisis, warns that the State's renewable energy goals will not be met if the State imposes unreasonable curtailment, "making investment in wind energy unattractive in the State."[196] Baron contends that the curtailment recommended by the Examiners would impose a substantial loss of clean energy generation and result in significant financial constraints. According to the Applicant, by not allowing wind projects to operate at full capacity, additional renewable energy projects will be necessary to meet the State's goals, and the level of curtailment recommended in the RD is contrary to the Governor's goals. The Applicant asserts that the evidence fully supports Baron's argument that lower curtailment regimes are protective.

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192 RD, p. 67.

193 RD, p. 67.

194 RD, p. 68.

195 RD, p. 68.

196 Baron's Brief on Exceptions, p. 14.

Moreover, Baron maintains that any estimated take of NLEB that would occur above a lower curtailment regime would be mitigated by the NCBP required by the Certificate Conditions.

Baron argues that the cut-in speeds advanced by DEC and DPS Staff are arbitrary, not based on site-specific factors, and result in substantial energy loss with minimal additional benefits to bats. Baron contends that the agencies and the Examiners engaged in improper rulemaking, specifically, the adoption of a curtailment regime dependent upon project economics. Baron asserts that neither DEC nor DPS Staff have defined what "uneconomic" means or what percent loss a project would have to demonstrate to meet such a standard. Baron further argues that no guidance has been provided as to what such a standard could entail. As a result, projects have varying levels of curtailment with no guidance as to differences among those projects.

Specifically, Baron argues that the RD does not adequately explain why the 5.0 m/s cut-in speed approved for Cassadaga is not appropriate for Baron. The Siting Board in Cassadaga examined the same evidence, and Baron provided "substantially more" record evidence in this proceeding on economic impacts due to curtailment.[197] The Applicant goes on to point out that DEC and DPS Staff have agreed to curtailment speeds below 6.0 m/s in three other projects: Eight Point, Bluestone, and Number Three Wind.

In its Brief Opposing Exceptions, DPS Staff notes that one of the most significant adverse environmental impacts that will result from operation of the Facility is bat mortality. DEC Staff, in turn, emphasizes that wind turbines are the greatest source of mortality for several North American bat

[197] Baron's Brief on Exceptions, p. 20.

species, and that it is unlikely that the current populations of those bats most commonly killed can sustain this level of mortality.[198] DPS Staff contends that its recommended curtailment regime would minimize impacts to bats, while having a negligible effect on the Project's finances, as well as the State's Clean Energy Standard goals. Moreover, DPS Staff points out that the Applicant's arguments about the severity of climate change, advanced for the first time in Baron's Brief on Exceptions, were not identified as an issue for adjudication, or made part of the record. According to DPS Staff, the Applicant's argument undermines the intent of Article 10, "which calls for thoughtful deliberation supported by findings required by PSL §168. The Applicant is essentially urging the Siting Board to disregard environmental impacts other than greenhouse gas emissions."[199]

In its Brief Opposing Exceptions, DEC Staff notes that the references cited in the section of Baron's Brief on Exceptions regarding climate change were not offered as references at the hearing, and no arguments were presented at that time. DEC Staff goes on to point out that commercial wind projects can and do operate at higher seasonal curtailment levels than 5.0 m/s, as DPS witness Rosenthal testified.[200] DEC Staff also notes that the Eight Point, Bluestone, and Number Three Wind projects have each settled on a 5.5 m/s cut-in speed.[201]

With respect to Baron's argument that requiring curtailment and evaluating energy and cost impacts amounts to improper rulemaking, DPS Staff observes that it is the Applicant

198 DEC Staff's Brief Opposing Exceptions, p. 10

199 DPS Staff's Brief Opposing Exceptions, p. 4.

200 3/20/19 Tr. 453.

201 DEC Staff's Brief Opposing Exceptions, p. 12.

in this case, and all other Article 10 wind farm cases to date, who initially proposed curtailment regimes as part of their applications. According to DPS Staff, the Applicant made contradictory arguments regarding costs, stating that curtailment above 5.0 m/s is too costly, but then objecting to other parties' independent review of the Applicant's assertions as rulemaking. DPS Staff maintains that the issue of bat mortality is common to all terrestrially-sited wind energy facilities sited in New York, and that recommending mitigation measures is inherent in addressing that issue. As directed by the Siting Board in the Cassadaga matter, DPS Staff evaluated benefit (reduced risk) with consideration of associated fiscal and energy costs. DPS Staff concludes that its evaluation of curtailment costs "is no more a rulemaking than any other aspect of evaluating impacts to bats."[202]

DPS Staff goes on to argue that its evaluation found the costs of curtailment at 6.0 m/s to be *de minimis*. Noting that it was Baron that argued that revenues were not an adequate method of evaluating costs, and that such an evaluation should consider the Project's net present value (NPV), DPS Staff inquired about the Project's NPV. According to DPS Staff, after conducting that evaluation, DPS Staff determined that "[t]he NPV of the Project does not hinge on curtailment costs."[203] DPS Staff disputes Baron's argument that the evaluation of costs amounts to the imposition of an economic test, and asserts that DPS Staff's evaluation did not establish a new rule or policy. Rather, DPS Staff maintains that its economic evaluation provided "an understanding that the significance of curtailment

[202] DPS Staff's Brief Opposing Exceptions, p. 6.

[203] DPS Staff's Brief Opposing Exceptions, p. 7.

costs, as presented by the Applicant, are unsubstantiated."[204] The evaluation, according to DPS Staff, showed that higher cut-in speeds "are supported both in terms of risk minimization and the overall balance of costs and energy impacts."[205] In its Brief Opposing Exceptions, DEC Staff concurs with DPS Staff, and notes that "[d]espite the Siting Board's admonition in Cassadaga, the Applicant has not sustained its burden on economics," and has not offered any other reason why Baron cannot adopt the higher cut-in speed.[206]

DPS Staff reiterates that the difference in energy production between DPS Staff's proposed curtailment of 6.0 m/s and the Applicant's 5.0 m/s cut-in speed results in an energy reduction of 0.004%.[207] DPS Staff asserts that adopting a curtailment speed of less than 6.0 m/s will result in less protection for bats in exchange for essentially no energy benefit toward the State's Clean Energy Standard goals. DPS Staff goes on to point out that three species of migratory tree bats are at risk of serious population decline, and possible extinction. According to DPS Staff, the incremental reduction in risk at the higher cut-in speed is substantial. Baron's own estimates indicate that a cut-in speed of 6.0 m/s will result in 6,570 fewer bat deaths over the lifetime of the Project, and that number increases to 12,840 fewer deaths at a cut-in speed of 6.9 m/s.[208]

Baron maintains that the RD did not explain why the cut-in speed approved for Cassadaga was not appropriate for the

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204 DPS Staff's Brief Opposing Exceptions, p. 7.

205 DPS Staff's Brief Opposing Exceptions, p. 7.

206 DEC Staff's Brief Opposing Exceptions, p. 21.

207 DPS Staff's Brief Opposing Exceptions, p. 5.

208 DPS Staff's Brief Opposing Exceptions, p. 10; Hearing Exh. 105.

Baron Winds project. DPS Staff responds that, as its witness explained in his testimony, the Cassadaga decision "was predicated on the idea that mitigation for Northern Long Eared Bats (NLEBs) would also provide benefit to migratory tree bats."[209] Ultimately, the mitigation adopted in Cassadaga identified roost trees for NLEB's on Long Island, and as a result, did not benefit migratory bats. DPS Staff states that it recommended a higher cut-in speed in this proceeding to protect migratory tree bats, "which suffer the greatest mortality from wind turbines and do not receive the benefit of mitigation."[210] Moreover, according to DPS Staff, the Cassadaga decision "was made against a backdrop where the significance of curtailment costs was not well understood," leading the Siting Board in that case to direct that curtailment costs be evaluated in future Article 10 proceedings.[211] DPS Staff concludes that cost and energy impacts support higher cut-in speeds. As to the lower cut-in speeds agreed to in other cases awaiting determinations by us, DPS Staff notes that the we have not adopted any of those, and therefore DPS Staff's recommendation of 6.0 m/s is still an option for those projects. DPS Staff argues further that this case "is easily distinguished from other pending cases in that it does not include a negotiated settlement containing other elements in a package to minimize impacts to bats."[212]

In this regard, DEC Staff notes that the three other proposed projects would operate at a higher seasonal curtailment speed (5.5 m/s) than the Applicant advocates in Baron Winds.

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209 DPS Staff's Brief Opposing Exceptions, p. 9; 3/20/19 Confidential Tr., pp. 478-479.

210 DPS Staff's Brief Opposing Exceptions, p. 10.

211 DPS Staff's Brief Opposing Exceptions, p. 10.

212 DPS Staff's Brief Opposing Exceptions, p. 10.

DEC Staff asserts that presumably the projects with curtailment speeds greater than 5.0 m/s "will make money while reducing their impacts on bats," and went on to argue that the fact that other projects agreed to operate with a 5.5 m/s curtailment "should not constitute a ceiling on curtailment as the law requires that impacts to bats be minimized or avoided to the maximum extent practicable."[213] DEC Staff goes on to maintain that the Applicant in this proceeding should not be given a competitive advantage as compared to projects that have agreed to a more environmentally protective curtailment regime. As for the curtailment regime in the Cassadaga decision, DEC Staff points out that the Cassadaga decision was made on a partial record concerning project economics, and there was no opportunity to adjudicate economic information, because such information was not available. By contrast, in this case, the Applicant provided information and DPS Staff determined that the information was insufficient to justify Baron's proposed lower seasonal curtailment speed.

DEC Staff also disputes Baron's argument that minimization has been achieved at 5.0 m/s, and Baron's assertion that the 20-30% of bats that go unprotected after curtailment is nominal. According to DEC Staff, "[t]wenty to thirty percent can hardly be described as nominal when talking about a threatened or endangered species," noting that endangered species protection is only granted in situations where the loss of even a single individual must be addressed.[214]

DPS Staff recommends a 6.0 m/s cut-in speed, but states that its recommendation is purposely open-ended, to allow the Siting Board to evaluate the record and decide what speed is

[213] DEC Staff's Brief Opposing Exceptions, p. 12.

[214] DEC Staff's Brief Opposing Exceptions, p. 13.

most appropriate. DPS Staff contends that providing the Siting Board with a more complete record does not constitute rulemaking, and DPS Staff has not, contrary to the Applicant's argument, created an economic test or standard universally applicable to the adoption of minimization measures. DPS Staff also disputes Baron's contention that the variation between Cassadaga's cut-in speed, and the cut-in speed in other pending cases, is arbitrary. DPS Staff points out that it has not argued for one cut-in speed to be established for all Article 10 cases, and that the cases pending before the Siting Board "address minimization of bat impacts through a package of measures beyond cut-in speed."[215] According to DPS Staff, it "has advocated for adaptive management" as illustrated by proposed Certificate Condition 62 in the RD.[216]

DEC Staff argues that Baron's rulemaking argument is meritless, and cites to Matter of Entergy Nuclear Indian Point 2, LLC v NYS Dep't of State, 130 A.D.3d 1190 (3rd Dept. 2015), wherein the Third Department held that an agency does not engage in formal rulemaking when the practical effect of an agency policy "is that a discrete group of regulated entities or individuals likely will be subjected to a greater degree of regulatory scrutiny than are the majority of those regulated by the agency."[217] The court went on to note that DOS's habitat test that would govern industrial activity near the Hudson Highlands did not constitute a formal rule because it encompassed "both fixed and variable factors unique to a particular industrial activity," and that those factors would be considered on a case-

215 DPS Staff's Brief Opposing Exceptions, p. 8.

216 DPS Staff's Brief Opposing Exceptions, p. 9.

217 130 A.D.3d 1194 (citations omitted); DEC Staff's Brief Opposing Exceptions, p. 15.

by-case basis.[218] DEC Staff concludes that seasonal curtailment of at least 6.0 m/s is the preferred methodology to minimize or avoid impacts to bats, to the maximum extent practicable.

Baron has agreed to Certificate Condition 62, which will require a regular review of curtailment, similar to the conditions proposed in the other proceedings. Baron argues, however, that the requirement that the review take place every five years is arbitrary. Baron contends that "the science surrounding methods to optimize curtailment by focusing on conditions of highest risk is advancing rapidly and requiring arbitrarily higher cut-in speeds as opposed to setting target reductions and allowing flexibility in achieving those goals simply limits the ability of the wind industry to operate profitably while providing diminishing benefit to bats."[219] If the Siting Board adopts the RD's recommendations, Baron claims the Project would have the highest level of curtailment with no justification or project-specific impact assessment.

In response, DPS Staff states that it is receptive to earlier reviews and recommends changing the language of the Certificate Condition from "every five years" to "at least every five years." DPS Staff indicates that its intent in recommending the Certificate Condition is to provide a vehicle where emerging technologies, such as bat deterrence, could be evaluated and adopted. Nevertheless, DPS Staff states that Baron's language in its Brief on Exceptions "raises concerns because it is disguised as an argument for its recommended curtailment. . . . The Applicant appears to be trying to set the groundwork to use Condition 62 to re-argue early and often its

[218] 130 A.D.3d at 1195.

[219] Baron's Brief on Exceptions, p. 21.

preferred curtailment, which is not the purpose or intent of the condition."[220]

Baron goes on to assert that the record does not support DEC Staff's NLEB take calculation. DEC Staff's composition number and per-MW multiplier are far too conservative, in Baron's view. Baron argues that DEC Staff's inclusion of the Wethersfield project skews the predicted take, and disputes the statement in the RD with respect to the uncertainties associated with number of bats killed compared to number of carcasses recovered, arguing that the statement is not supported by the record.

Baron maintains that the RD ignored Baron's willingness to implement a phased mitigation approach to address DEC Staff's concern's regarding the take calculation. Baron had proposed a Certificate Condition requiring it to implement additional mitigation to ensure a net conservation benefit to NLEB, and incorporate site-specific data and take into account the fact that turbine technology is moving in the direction of fewer, larger turbines.

With respect to the Applicant's proposed curtailment regime, Baron takes the position that curtailment at 5.0 m/s would minimize and avoid adverse impacts to the maximum extent practicable (80% for NLEB, all bats by at least 50%). According to Baron, the record lacks evidence that migratory tree bats should receive a greater level of protection than a 5.0 m/s cut-in speed would provide, and DPS Staff's assertions are speculative and unsupported. Baron states that "[s]imply by feathering the turbine blades . . . below the turbine's cut-in speed (generally 3.0 m/s) bat fatalities can be reduced by an

[220] DPS Staff's Brief Opposing Exceptions, p. 9.

average of 35 percent without any energy loss."[221] Baron asserts that the Examiners improperly dismissed Baron's information regarding the financial impact of the higher cut-in speed on the financial viability of the project. Baron noted that the Project was not bid into NYSERDA's competitive bid solicitation process for renewable energy credits (RECs) with an assumed 6.9 m/s curtailment; the bid-REC price would have been higher if 6.9 m/s were required.

In response, DEC Staff asserts that its estimates "come about from the reality that post-construction monitoring only captures a small percentage of the number of bats that are killed by turbines based on searcher efficiency and the time that is put into the effort."[222] DEC Staff refers to the testimony of its expert in the Cassadaga Wind proceeding, who stated that most post-construction surveys find only a very small percentage of the number of bats that are killed at the project at the time the survey is performed.[223] DEC Staff contends that we should give deference to its technical expertise in this regard, noting that there is a statistical probability that operating wind turbines at lower cut-in speeds will result in increased bat mortality.

According to DEC Staff, the per-megawatt approach to estimating bat fatality, as opposed to the per-turbine approach, better accounts for the fact that more bats are killed as turbine size increases. DEC Staff argues that notwithstanding whether there is a direct scalability between megawatts and number of bats killed, only bat fatalities per megawatt agrees with the best available data. DEC Staff also contends that the

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221 Baron's Brief on Exceptions, p. 25.

222 DEC Staff's Brief Opposing Exceptions, p. 17; 3/20/19 Tr. 641, 643-48.

223 July 17, 2017 Cassadaga Wind Tr., pp. 648-49.

dataset it used was more relevant to the Project's location in New York State, and pointed out that the Applicant's proposed dataset was dominated by studies performed in Pennsylvania. DEC Staff notes that the reference source employed by Baron's consultant provided no data on turbine location, "precluding DEC Staff's ability to assess the ecological relevance to New York."[224]

In its Brief on Exceptions, the Town of Fremont excepts to the RD only to the extent that the RD does not recommend the 6.9 m/s cut-in speed requested by DEC Staff.[225] In its Brief Opposing Exceptions, the Town contends that DEC Staff presented substantial evidence to support a cut-in speed of 6.9 m/s as most protective of bats, and that DPS Staff presented substantial evidence that a cut-in speed of 6.0 m/s would be required to protect three species of bats, all of which can be found in the Project area.

The Town also took issue with Baron's arguments regarding greenhouse gas emissions and the necessity for wind energy projects to mitigate climate change. The Town states that it does not dispute the importance of renewable energy projects in that regard, but that "it seems inappropriate to insist that a significant number of bats be sacrificed just to maximize electricity production, when a very small reduction in that production could effectively protect almost all bats from being killed."[226] Acknowledging that greenhouse gas reduction is a worthy goal, the Town nevertheless argues that Baron should not be allowed to assert such reduction as a justification to endanger wildlife or other important environmental resources.

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224 DEC Staff's Brief Opposing Exceptions, p. 20; Hearing Exh. 270.

225 Fremont's Brief on Exceptions, p. 4.

226 Fremont's Brief Opposing Exceptions, p. 4.

The Town goes on to assert that the economic impact of operating with a cut-in speed of 6.0 or 6.9 m/s would be minimal, compared with the 5.0 m/s Baron proposed. The Town concluded that "[s]ince the difference in electricity production is very small, the economic impact is also very small, and should not be used as a justification to reduce the protection of bats."[227]

In her Brief on Exceptions, Intervenor Sokolow questions the rationale behind the conclusions in the RD regarding curtailment speed and the Siting Board's discretion to impose a lower curtailment than 6.9 m/s, and "wonders why this parameter is not enough to stop the project."[228] Referencing Stantec studies, ACENY and DEC recommendations, and agencies involved in siting Cohocton and another project, she maintains that in 2012, curtailment was set at 6.9 m/s. She lists as "missing in the analysis": the lack of independent statistical analysis with confidence levels; cumulative data already collected for the area; "analysis of whether the added impact to an already proven negatively impacted area makes any environmental sense"; analysis of more new wind projects; recommissioning of Cohocton and Dutch Hill (Canandaigua).[229]

Other questions posed by Intervenor Sokolow: "Active in the recommissioning is the town of Cohocton; where is their clarification? Is it not a fiduciary responsibility? The Applicant also knows"; "Where is the model, protocol and statistical risk analysis with acceptable confidence levels for any changes to the Certificate Conditions?"; "When were the continued discussions where Sokolow, et al. and other parties could participate in, along with FWS?"; "Where are the

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[227] Fremont's Brief Opposing Exceptions, p. 4

[228] Sokolow's Brief on Exceptions, p. 12.

[229] Sokolow's Brief on Exceptions, p. 13.

Alternative wind sites?"; and "What will be the total loss; the economic and environmental impact for Steuben County? Crops?"[230]

Intervenor Sokolow's Brief Opposing Exceptions states that Baron and its experts "were involved or had knowledge of the significant BAT deaths at Cohocton Wind since 2012"(emphasis in original).[231] She goes on to say that Everpower's representative recommended curtailment of 6.9 m/s, and concludes that "[n]o excuses should be allowed."[232] According to Intervenor Sokolow, "[c]hoosing a turbine, project area and wind resource that has minimal environmental impact has always been the goal in NY."[233] She argues that complaints of economic viability, after the fact, should not be accepted, and asks "[w]here were the alternatives?"[234] Finally, Intervenor Sokolow asserts that an independent statistician "should be required to unmask skews in the analysis and come up with any future modifications, if any. A new review with PUBLIC INPUT SHOULD BE REQUIRED" (emphasis in original).[235]

Discussion

Based upon the evidentiary record, we determine that the Project will result in the likely taking of multiple species of bats, including some species that are listed as threatened or of concern. Because of the potential take of the threatened NLEB, an incidental take permit in the form of Certificate Conditions is required before we can conclude that the Project will operate in compliance with applicable State endangered and

230 Sokolow's Brief on Exceptions, p. 13.

231 Sokolow's Brief Opposing Exceptions, p. 6.

232 Sokolow's Brief Opposing Exceptions, p. 6.

233 Sokolow's Brief Opposing Exceptions, p. 6.

234 Sokolow's Brief Opposing Exceptions, p. 7.

235 Sokolow's Brief Opposing Exceptions, p. 7.

threatened species law.[236] In addition, Baron is required to avoid or minimize impacts to all other bat species to the maximum extent practicable.[237]

With respect to the threatened NLEB, we conclude that the record also supports a finding that full avoidance of impacts to NLEB would require a seasonal curtailment regime using a 6.9 m/s cut-in speed.[238] The 6.9 m/s cut-in speed would result in the take of less than one NLEB in ten years. In addition, a 6.9 m/s cut-in speed would reduce impacts to all bat species by 89% over non-curtailment.

We also conclude, however, that Baron has demonstrated on this record that the 6.9 m/s curtailment regime is impracticable for purposes of the incidental take permit. Baron provided an analysis of the net present value (NPV) for the Project using non-curtailment (3.0 m/s cut in), a 5.0 m/s cut in, and a 6.9 m/s cut in.[239] The analysis shows that a curtailment regime using a 6.9 m/s cut-in speed would result in a negative NPV for the Project.[240] A negative NPV is likely to result in a loss of investors for the Project.[241] A curtailment regime that results in the loss of investors is impracticable. Thus, Baron has demonstrated that a 6.9 m/s curtailment regime is impracticable for this Project. Accordingly, a curtailment regime with a cut-in speed below 6.9 m/s is appropriate for this Project, provided Baron submits an Endangered or Threatened

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[236] See PSL §168(3)(e); ECL §11-0535; 6 NYCRR §182.11.

[237] See PSL §168(3)(c).

[238] See also Cassadaga Wind Order, p. 53.

[239] See Hearing Exh. 299.

[240] See Hearing Exh. 299.

[241] See Hearing Exh. 299; Reading Testimony, 3/20/19 Tr. 783-784.

Species Mitigation Plan (ETSMP)[242] for the potential take of NLEB above the full avoidance level.

With respect to the appropriate cut-in speed for this Project, the record before us supports the conclusion that a cut-in speed higher than the 5.0 m/s as proposed by Baron is required not only to protect the threatened NLEB, but to avoid and minimize impacts to migratory tree bat species as well. DPS Staff made a compelling record that the 5.0 m/s curtailment regime authorized in Cassadaga Wind is insufficiently protective of migratory tree bats -- which although not threatened or endangered are nonetheless species of special concern -- and would result in potentially unsustainable mortality rates for those species. DPS Staff also established that the NCBP developed in Cassadaga Wind provided no benefit to migratory tree bat species, contrary to the Siting Board's assumption in that case.

The Applicant's economic arguments regarding the impracticality of cut-in speeds over 5.0 m/s were effectively refuted by DPS Staff, and as discussed below, Baron's assertions with respect to climate change were not part of the record of the hearing, and are not considered here. Although Baron indicated that it would provide an analysis of a 6.0 m/s curtailment regime's impact on the Project's NPV, it did not do so.[243] In contrast, DPS Staff demonstrated that increasing the cut-in speed from 5.0 m/s to 6.0 m/s would result in only a 0.3% reduction in revenues, while reducing impacts to all bats species by 20%. Moreover, in response to Baron's analysis of

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[242] DEC Staff refers to the plan required by Part 182 as a Net Conservation Benefit Plan. Part 182 references, however, an Endangered or Threatened Species Mitigation Plan (see 6 NYCRR §182.11[d]). We use the regulatory title for the plan required for the Part 182 incidental take permit.

[243] Reading Testimony, 3/20/19 Tr. 788-789; Hearing Exhibit 299.

the impact of curtailment on a project NPV, DPS Staff notes that Baron's own analysis shows that the costs of curtailment are small relative to other costs and financial challenges facing the Project. In addition, DEC Staff points out that at least three other wind projects have settled on a 5.5 m/s curtailment regime, which leads to the reasonable assumption that wind projects remain economically feasible at that cut-in speed.

Accordingly, the present record supports the imposition of a curtailment regime during the period July 1 through October 1, requiring a minimum curtailment of 6.0 m/s, 30 minutes prior to sunset through 30 minutes after sunrise, as a measure to minimize impacts to all bat species to the maximum extent practicable (Certificate Condition 61). In addition, Baron must develop and submit an ETSMP for the potential take of NLEB estimated by DEC Staff at that wind speed.

With respect to the establishment in this case of a cut-in speed different from Cassadaga Wind, Baron's argument that DPS Staff has engaged in an improper rulemaking is not persuasive. We evaluate proposed mitigation, such as the curtailment regimes proposed by the Applicant in this case, on a case-by-case basis and based upon an evidentiary record developed through adjudication. Article 10 vests the Siting Board with significant discretion to establish requirements for wind energy projects based upon such a record. Here, the record in this case supports the imposition of a curtailment regime above the 5.0 m/s imposed in Cassadaga Wind to minimize impacts to all bat species to the maximum extent practicable. Moreover, as DPS and DEC Staff point out, the Applicant did not raise its policy arguments concerning greenhouse gas emissions and the Clean Energy Standards at the hearing, and those arguments are therefore unpreserved.

We also reject Baron's challenge to DEC Staff's methodology for calculating the potential take of NLEB. We agree with the Examiners that DEC Staff's methodology is rational and is a more conservative approach based on New York-relevant data. Accordingly, DEC Staff's methodology is approved to calculate the take of NLEB that must be accounted for in the ETSMP for NLEB.

Baron has indicated that it is willing to implement a phased mitigation approach to address DEC Staff's concerns regarding the take calculation. Certificate Condition 62 requires Baron to implement additional mitigation to ensure a net conservation benefit to NLEB, and incorporate site-specific data, taking into account any future improvements in technology. In addition, we modify Condition 62 as recommended by DPS Staff to allow for the review of curtailment operations at least every five years.

Based upon the relevant Certificate Conditions as modified above, we conclude that the Project will be operated in compliance with applicable State environmental laws, and that impacts to bats will be minimized or avoided to the maximum extent practicable.

c. Bald Eagles

Baron's surveys revealed the presence of bald eagles, which is a threatened[244] species, in the Project area.[245] These surveys showed four documented nests within a 10-mile buffer area and a new, active nest within the immediate Project area, approximately 0.7 miles from the nearest turbine.[246]

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[244] 6 NYCRR §182.5(b)(6)(iii).

[245] RD, p. 70.

[246] RD, p. 70.

The Examiners noted that bald eagles nest in live trees, within mature or older forests near waterbodies, and may reuse the nest for many years.[247] Although the bald eagle population has increased, the total number of bald eagles on the State's landscape is relatively small when compared to the potentially suitable nesting habitat, and to the population size of other raptor species in the State.[248]

The Examiners determined that significant impacts to bald eagles would arise during construction and operation of the Project.[249] Bald eagles may collide with wind turbines during nesting season if nests are near turbines, during migration if they move through an area where turbines are present, or during winter if they hunt or roost near turbines.[250] Turbine locations may also reduce efficient foraging movements.[251] DEC Staff projected that approximately 41 bald eagles could be killed over the 30-year life of the Project.[252]

DEC Staff argued that the Project, as proposed, did not avoid and minimize impacts to bald eagles.[253] In addition, DEC Staff maintained that Baron's agreement to conduct only post-construction monitoring of eagle nests would not provide any net conservation benefit for the take of bald eagles.[254] To minimize impacts to bald eagles, DEC Staff asserted that all Project components and other infrastructure should be placed

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247 RD, p. 69.

248 RD, p. 70.

249 RD, p. 76.

250 RD, p. 68.

251 RD, p. 71.

252 RD, p. 71.

253 RD, p. 72.

254 RD, p. 73.

greater than 660 feet from an eagle nest.[255] In addition, all Project components and other infrastructure not obscured from the nest by an adequate visual barrier should be placed greater than one-quarter mile (1,320 feet) from a nest.[256] Further, DEC Staff asserted that within the siting requirements above, minimization measures should restrict all ground disturbance, tree clearing, construction, restoration and maintenance activities to October 1 through December 31.[257]

DEC Staff noted that long-term impacts of wind energy projects on bald eagles are understudied because observations of changes in abundance and density of birds at wind energy projects are unlikely to be adequate between the first 2-5 years after project construction.[258] Additionally, although only one bald eagle fatality has been reported at a wind energy project in New York, 49 bald eagle fatalities have been reported at wind energy projects nationwide.[259]

DEC Staff proposed Certificate Conditions that include the filing of a Net Conservation Benefit Plan (NCBP) for eagles before construction commences, as well as post-construction wildlife monitoring.[260] DEC Staff noted that it would be willing to consider mitigation options Baron proposed, such as conservation of land around a previously-identified active eagle nest in the general vicinity of the Project.[261]

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255 RD, p. 72.

256 RD, p. 72.

257 RD, p. 72.

258 RD, pp. 72-73.

259 RD, p. 74.

260 RD, p. 73.

261 RD, p. 73.

Baron contended that no currently operating wind energy projects in New York have been issued an incidental take permit for bald eagles.[262] However, DEC Staff testified that no active bald eagle nests were within the areas of those existing or proposed wind energy projects.[263]

Baron argued that use of the Project area by bald eagles is low -- at least similar to or less than other nearby projects that DEC did not determine would result in a take of bald eagles.[264] Additionally, according to Baron, there is no evidence that bald eagles traveling through the Project area would bring food back to the identified nests, traverse the Project area to forage, or have their young practice flying around turbines.[265] Turbines, Baron noted, will be more than half a mile from the new nest and do not surround that nest on all sides.[266] Finally, Baron argued that impacts to nesting bald eagles would be avoided or minimized because the Project components comply with DEC's Conservation Plan for Bald Eagles in New York State.[267]

DEC Staff countered that most of Baron's data is at least three years old, and that Baron's newer studies did not characterize or assess risk to all nesting eagles within the Project area.[268] Moreover, impacts to the most recently documented nest have not been incorporated into Baron's

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262 RD, pp. 72-73.

263 RD, p. 76.

264 RD, p. 74.

265 RD, p. 75.

266 RD, p. 75.

267 RD, p. 75.

268 RD, p. 75.

assessment, and adequate measures have not been proposed to avoid or mitigate impacts.[269]

The Examiners concluded that Baron did not meet its burden of proving that the Project will operate in compliance with ECL Article 11 and 6 NYCRR Part 182.[270] Further, because the risk to bald eagles is significant and included the potential take of the listed species, the Examiners recommended that the Siting Board conclude that ECL Article 11 and 6 NYCRR Part 182 apply to this Project for bald eagles as well as the NLEB.[271] Accordingly, the Examiners recommended that the Siting Board adopt proposed Certificate Conditions 63 and 98 through 100,[272] which include the filing of a NCBP for bald eagles.[273]

In its Brief on Exceptions, Baron argues that the RD fails to provide any explanation or analysis justifying the adoption of DEC Staff's position that the Facility poses an increased risk to bald eagles, "simply as a result of the identification of proximate nests." In Baron's view, nest proximity does not automatically equate to risk, or likelihood of a taking. According to Baron, past and ongoing observations of bald eagles in the Facility Area are low, and similar to, or less than, other similarly situated projects. The risk is premised solely on DEC Staff's speculation that bald eagles from the nest might fly over the Facility Area to forage, but Baron takes the position that eagles are just as likely to remain within the nearby foraging corridors. Baron argues that, unlike the Applicant's assessments, DEC Staff's presumptions are not

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269 RD, p. 76.

270 RD, p. 76.

271 RD, pp. 76-77.

272 RD, Appendix A, pp. 26, 43-44.

273 RD, p. 73.

based on site specific observational data. Baron contends that DEC Staff's take estimate relies almost exclusively on a presumed 100% fatality estimate of fledgling bald eagles, "which is an exaggeration and inconsistent with known fledgling risk from turbines."[274] The Applicant concludes that the evidence does not support application of ECL Article 11 and Part 182 of 6 NYCRR to the Project.

In its Brief Opposing Exceptions, DEC Staff disputes Baron's assertion that bald eagles are just as likely to forage near the nest or in other foraging corridors that border the Project, noting that Baron's witness acknowledged that this assertion was speculative.[275] DEC Staff also takes issue with Baron's position that increased wind energy facility installation has not resulted in a corresponding increase in bald eagle collisions with turbines. DEC Staff cites to studies referenced in its witnesses' pre-filed testimony indicating that while between 1997 and 2012 only six fatalities were recorded at wind facilities, between 2013 and 2018 that number spiked to 49 recorded collisions; 32 of those collisions were recorded in the last three years alone.[276]

Baron argues that the use of the Facility by bald eagles determines the risk, not the presence of a nest in proximity; if bald eagles are not flying in areas where turbines are proposed, the risk of collision is low or nonexistent. In support of this argument, Baron refers to the US Fish & Wildlife Service's risk model, which does not consider any nest information, but rather predicts fatalities based upon exposure minutes in areas where turbines are present. Baron contends

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274 Baron's Brief on Exceptions, p. 28.

275 DEC Staff's Brief Opposing Exceptions, p. 25.

276 DEC Staff's Brief Opposing Exceptions, p. 24-25; 3/21/19 Tr. 201-202.

that DEC Staff's theories and speculation are not supported by the record.

DEC Staff counters that "bald eagle usage, specifically nesting, within the project boundaries has increased 400% since the original eagle usage studies in 2013, including the addition of two nests – Neils Creek and Upper Hornell Reservoir – within the Project Area."[277] According to DEC Staff, nesting may be the most important usage associated with eagle fatalities. Moreover, the newest nests are situated on waterbodies that freeze and thus are not available for eagles to forage at least until mid-March.[278] Those waterbodies (the Cohocton and Canisteo Rivers) "have been documented as high-use eagle migration corridors."[279] DEC Staff argues that the original studies conducted by Baron could not possibly address the increase in bald eagle foraging, provisioning for nesting, and young eagles fledgling, because these newly discovered nests had not been established. DEC Staff goes on to contend that even the studies Baron performed in 2017 were limited in scope, and concludes that "[a]t this point, with such an increase in eagle nesting in just 5-6 years, the dated eagle observations submitted by the Applicant are no longer relevant and the Applicant has provided no evidence that the eagles are unlikely to pass through turbine fields to access the larger rivers in the area (Canisteo and Cohocton). In short, the Baron site contains an unprecedented amount of eagle activity – very likely

277 DEC Staff's Brief Opposing Exceptions, p. 25; Hearing Exh. 133.

278 3/21/19 Tr. 296-297.

279 DEC Staff's Brief Opposing Exceptions, p. 26, fn. 10; 3/21/19 Tr. 226-227.

because of the rich hunting grounds available at the Canisteo and Cohocton rivers."[280]

Finally, in its Brief Opposing Exceptions, DEC Staff argued that the Baron Winds project is unique in having active bald eagle nests situated in the middle of turbine fields with turbines located between the nests and known bald eagle foraging areas, specifically the Cohocton and Canisteo Rivers. According to DEC Staff, "[t]his is unlike other wind projects where nests may be located on the periphery of the turbine fields."[281] DEC Staff also distinguished this Project from the Eight Point Wind proposal, referenced by Baron, which does not have nests within the turbine fields or even on the periphery of the turbine fields. Baron's arguments regarding eagle use of the Project area were effectively refuted by DEC Staff. Based on our review of the record, 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, an ETSMP for bald eagles is required to assure compliance with State endangered and threatened species law and regulations.[282] This finding is based on the existence of new and active bald eagle nests in the Project area, and rich foraging grounds and high-use eagle migration corridors near that area. Moreover, as stated in the RD, "[i]n light of the evolving data regarding eagle use and nesting in the area, a more conservative approach is warranted."[283]

Baron referred to the USFWS's collision risk model, which that agency uses to estimate the potential for take of

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280 DEC Staff's Brief Opposing Exceptions, p. 27.

281 DEC Staff's Brief Opposing Exceptions, p. 31.

282 As noted above, we use the title of the plan referenced by Part 182, not the NCBP referenced by DEC Staff.

283 RD, pp. 76-77.

bald eagles at wind projects, but as DEC Staff notes, that model does not consider any nest information, but rather predicts fatalities based upon exposure minutes in the turbine area. Nevertheless, as DEC Staff points out, the USFWS uses more information than just the model to assess risk, and "the exposure minutes are meant to augment the nest site assessment."[284] The USFWS Guidance notes that one-half the mean inter-nest distance has been used as a coarse approximation for the territory boundary in several raptor studies, but goes on to note that in some situations, such as where nests are concentrated along rivers for bald eagles, "1/2 the mean inter-nest distance may not encompass all important parts of the territory. In these situations, inferences based on nest spacing should be used cautiously."[285] DEC Staff maintains that based upon the fact that 85% of the turbines at the proposed facility are within the mean inter-nest distance of multiple nests, "the USFWS would likely consider the current placement a collision risk,"[286] and concludes that the Project is a high risk for eagles.

Noting that the Facility complies with DEC's Conservation Plan for Bald Eagles in New York State, Baron asserts that the RD's statement that the facility may result in adverse impacts is unsupported in the record. The closest turbines are well outside the distances recommended in the Plan, and collection lines are proposed to be underground. Baron asserts that "[w]hen a project complies with DEC's own guidance for avoiding and minimizing impacts to nesting bald eagles, it

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[284] DEC Staff's Brief Opposing Exceptions, p. 29.

[285] DEC Staff's Brief Opposing Exceptions, p. 30; Hearing Exh. 284, p. 14.

[286] DEC Staff's Brief Opposing Exceptions, p. 30.

would be arbitrary and capricious to find otherwise."[287] Baron argues that fledgling eagles will remain close to the nest, and adult eagles will use the closest foraging sites, which are not located across the Facility area. However, the Conservation Plan's set back requirements only address construction-related impacts to bald eagle nests.[288] As noted by DEC Staff, the fact that the Facility meets the setback requirements in the Conservation Plan does not minimize or avoid operational impacts of the turbines, as Baron's witness conceded.[289] Other avoidance and mitigation measures are necessary to address operational impacts to bald eagles.[290]

Baron also disputes the RD's statement regarding impacts to the most recently documented nest, stating that three of the four nests identified were incorporated into previous surveys. The fourth nest, according to Baron, is currently being monitored, and Baron has agreed to develop an Eagle Management Plan as part of the Bird and Bat Conservation Strategy. Baron has also agreed to a Certificate Condition that requires Baron to report any new bald eagle nest, or bald eagle mortality, to DEC Region 8 within 48 hours of discovery, and to post and avoid any nest. Nevertheless, as discussed above, Baron's previous surveys did not include the most recently discovered nests, and monitoring of those nests is ongoing.

Baron argues that DEC Staff's take estimate was grossly overstated, and that for the estimate to be accurate,

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[287] Baron's Brief on Exceptions, p. 31.

[288] DEC, Conservation Plan for Bald Eagles in New York State, Hearing Exh. 13, p. 33.

[289] DEC Staff's Brief Opposing Exceptions, p. 32; 3/21/19 Tr. 337-338.

[290] See DEC, Conservation Plan for Bald Eagles in New York State, Hearing Exh. 13, p. 36.

"the Facility will have to be the sole cause of mortality or nest failure for every year the Project is in operation or the nest will have to be successful in raising 1.3 chicks every year, and every single one of those chicks must be killed by a turbine."[291] Baron points out that bald eagle survival is only 50%, "regardless of whether the Facility is constructed or not."[292] Baron's take estimate was closer to 15 bald eagles (with assumptions for nest failure, chick mortality, and turbine collision), and Baron concludes that "[e]ven if the Siting Board were to find some risk which must be addressed under Part 182, the 'net conservation benefit' mitigated for should be 15 bald eagles, not 41 as claimed by DEC."[293]

Based upon our review of the record, we conclude that DEC Staff's take estimate more comports with the weight of the evidence. We reject Baron's challenge to DEC Staff's take estimate as unsupported and speculative. Accordingly, DEC Staff's take estimates should be used in the development of an ETSMP for bald eagles.

Baron notes that Certificate Condition 98 conflicts with Condition 100; reporting requirements and avoidance distances differ between the two. Baron recommends that notification should be within 48 hours of discovery of a nest, or bald eagles exhibiting breeding behavior in the Facility area. Baron also recommends posting an area 1,320 feet in radius from the nest if there is no visual buffer, or 660 feet in radius if there is a visual buffer. According to Baron, the revised Condition reflects the area of concern (the Facility site), as opposed to the larger Project area, and provides for a

[291] Baron's Brief on Exceptions, p. 33.

[292] Baron's Brief on Exceptions, p. 33.

[293] Baron's Brief on Exceptions, p. 33.

more reasonable 48-hour reporting period, consistent with the timeframe adopted in the Cassadaga proceeding.

DEC Staff does not agree with Baron's proposed condition, and argues for the 24-hour reporting period, and for the inclusion of observations of the northern harrier, short-eared owl and upland sandpiper as well as the bald eagle. In addition, DEC Staff's Certificate Condition, as originally proposed, refers to the Project area, rather than the Facility area, but includes the same posting distances as those advanced by the Applicant.[294]

We revise the Certificate Conditions to include the additional species, but to provide for a 48-hour reporting period for observations within the Facility Area, consistent with the Cassadaga Order. Areas to be posted will be 1,320 feet in radius from an eagle nest if there is no visual buffer, or 660 feet in radius with a visual buffer in place.

In its Brief on Exceptions, the Town of Fremont excepts from the RD "only to the extent that it may not fully recommend the protection, monitoring measures and certificate conditions recommended by the DEC Staff."[295] The Town urges the Siting Board to fully adopt the requests of DEC Staff relating to bald eagles. The Town notes that "[b]ald eagles are an important and celebrated part of the local environment and add to the rich character of the community, and many residents of Fremont are attached to and take great interest in observing them."[296] According to the Town, the record demonstrates a real potential for bald eagle fatalities or other disruptive impacts on nesting, fledging and foraging.

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[294] 3/21/19 Confidential Tr. 240-242.

[295] Fremont's Brief on Exceptions, p. 4.

[296] Fremont's Brief on Exceptions, p. 4.

In its Brief Opposing Exceptions, the Town asserts that there is a clear basis for the findings and conditions in the RD, and that "[i]t is certainly appropriate for the RD to include a requirement for a Net Conservation Benefit Plan for take of bald eagles."[297] With respect to Baron's arguments regarding the increase in bald eagle numbers, the Town responds that "the progress and recovery of bald eagle populations in New York is worth celebrating, but is the result of much diligent effort," and contends that it is not appropriate for Baron to dismiss the risk to this species.[298]

In her Brief on Exceptions, Intervenor Sokolow generally agrees with DEC Staff that all project components and other infrastructure should be placed greater than 660 feet from an eagle nest, and all project components and infrastructure not obscured from the nest by an adequate visual barrier should be placed greater than one-quarter mile, or 1,320 feet, from a nest. In addition, activities should occur only between October 1 and December 31 within those restricted areas.[299] She also concurs that impacts on bald eagles from wind projects is understudied, and recommends that US Fish & Wildlife modeling be added to properly evaluate the risks while comparing Baron to other surrounding windfarm development. She goes on to state that "[t]he absence of the Fremont area in the original studies, and applicant's poor response to and disbelief of our sightings at the preliminary hearing with requirement of further proof and documentation . . . was unsettling to say the least. . . . What other sightings by the public have been downplayed or misguided

[297] Fremont's Brief Opposing Exceptions, p. 5.

[298] Fremont's Brief Opposing Exceptions, p. 5.

[299] Sokolow's Brief on Exceptions, pp. 13-15.

due to the proprietary nature of the submission process? Sightings should always be accepted as timely."[300]

Intervenor Sokolow further asserts that renewable energy companies should model exemplary environmental stewardship. She is concerned regarding long-term compliance with Certificate Conditions, as well as cumulative impacts in an already compromised area vis-à-vis bats and eagles; "a veritable killing field that must be addressed."[301] Intervenor Sokolow concludes that the Certificate must be denied. This intervenor's Brief Opposing Exceptions states that "[t]he modification of the Compliance by the sponsor eliminates Migratory Eagles."[302] She maintains that any eagle viewed by Baron or the public should be reported within 48 hours, and goes on to state that "I would advise the public to report it to FWS, [NYSDEC] and the applicant."[303] Intervenor Sokolow states that pictures would be helpful, as well as documentation related to the sighting, and that "[t]here should be a protocol with in put from FWS and the public prior to CEPCN."

In light of the relevant Certificate Conditions, we find that the potential adverse impacts to bald eagles have been avoided or mitigated to the maximum extent practicable, and that the Project will be constructed and operated in compliance with applicable State law governing endangered and threatened species. As set forth in Certificate Condition 63, the Applicant is directed to file an ETSMP for bald eagles to address the potential take of eagles as a result of Project construction and operation. The ETSMP shall include measures to

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[300] Sokolow's Brief on Exceptions, pp. 14-15.

[301] Sokolow's Brief on Exceptions, p. 15.

[302] Sokolow's Brief Opposing Exceptions, p. 7.

[303] Sokolow's Brief Opposing Exceptions, p. 7.

fully avoid impacts to bald eagles (less than one eagle taken per 10 years) or, if the Applicant demonstrates to DEC and DPS Staff that full avoidance is impracticable, minimization measures that result in a net conservation benefit to the species.

With respect to the concerns expressed by the Town of Fremont and Intervenor Sokolow, we conclude that they are adequately addressed by the above referenced Certificate Conditions.

E. Public Health and Safety

PSL §168(2)(b) requires examination of probable adverse impacts to public health and safety from the construction and operation of a wind farm facility. The Examiners reviewed the potential risks to public health and safety that wind turbines pose from tower collapse, blade throw, ice shedding or ice throw, and noise. We agree with the Examiners that the Project may have impacts related to public health and safety and that, with the appropriate Certificate Conditions in place, such impacts have been minimized or avoided to the maximum extent practicable.[304]

1. Tower Collapse, Blade Throw

The Examiners found that tower collapse and blade throw are extremely rare, but possible, and that reasons for tower collapse or blade throw vary depending on conditions and tower type. The Examiners found that the main causes of blade and tower failure are: control system failures, leading to an over-speed situation; lightning strikes; and manufacturing defects in the blade. The Examiners found that an incident involving tower collapse, blade throw or lightning strike in

[304] Hearing Exh. 1, Application Exh. 15.

connection with this Project could negatively impact natural gas infrastructure.[305] The Examiners recognized that technological improvements and mandatory safety standards during turbine design, manufacturing, and installation, as well as wind turbine design certification, have significantly reduced the likelihood of blade throw and tower collapse.[306]

The Examiners noted that while modern wind energy projects have been operating in the United States for more than 15 years, there are no known instances of injury to a member of the public at a wind farm in the United States because of operational malfunctions. The Examiners further stated that the risks associated with large-scale wind energy production have become better known and understood resulting in refinement of procedures and controls to minimize the likelihood of incidents, or to prevent them from occurring.

As indicated by the Examiners, establishing adequate setbacks from potential targets is an effective way to minimize the potential risks from incidents such as tower collapse and blade throw. The Examiners found that the Applicant's emergency response plans are thorough and consistent with the Siting Board's regulations.[307] The Examiners also concluded that the Project's design includes provisions intended to protect against potential harm from turbine tower collapse and blade throw and was prepared in accordance with industry-developed and local setbacks that have been demonstrated to effectively protect area residences and buildings and public roads.[308] Other public safety protections flow from the international engineering standards

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[305] RD, p. 80; DPS Staff Initial Brief, p. 28.

[306] See Hearing Exh. 1, Application Exh. 15(e)(1).

[307] See Hearing Exh. 1, Appendix W.

[308] See Hearing Exhs. 1 and 9, Application Exh. 15(e)(1), Application Exh. 6 and Updated Application Exh. 6.

pursuant to which modern turbines are certified,[309] including ratings for withstanding hurricane-strength winds and other criteria.[310]

The Examiners found that the turbines to be used in the Project will be equipped with state-of-the-art braking systems, pitch controls and speed controls that will ensure that the turbine rotors will stop spinning under all foreseeable conditions. The braking systems automatically shut down the turbines at wind speeds that exceed the manufacturer's recommended operational maximum speed.[311] Additionally, the turbines will cease operation if the turbines' internal monitoring systems detect significant vibration or rotor blade stress. Certificate Condition 30 is proposed to ensure that the turbines selected for the Project meet these design standards.[312]

In the Examiners' opinion, the risk of catastrophic blade throw or tower collapse has been minimized to the maximum extent practicable and protections, in the form of adequate setbacks, are in place to protect the public if such an event occurs. The Examiners were satisfied that the three-step certification process, which consists of an engineering assessment of the design of the turbine, an evaluation of its suitability for the specific location of operation, and post-construction review by an independent engineer to confirm that certification requirements have been met, is more than adequate to ensure that the turbines selected by the Applicant are

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309 See Hearing Exh. 1, Application Exh. 15(e)(1).

310 RD, p. 82; see Hearing Exh. 1, Application Exh. 15; 3/20/19 Tr. 751-757.

311 RD, p. 82, see Hearing Exh. 9, Updated Application Exh. K [Turbine Brochure Material]; Hearing Exhs. 38 and 39.

312 See Hearing Exh. 32, CRR-3.

appropriate and that the Project will not pose a significant public health risk.[313]

The Examiners recognized that the Applicant has developed a preliminary Quality Assurance and Control Plan (QA/QC Plan) demonstrating how it will monitor and assure conformance of Project construction with the applicable design, engineering and installation standards.[314] This QA/QC Plan, which is not the subject of dispute, is site-specific and will be finalized after the balance of plant contractor is selected and construction of the Project begins.[315]

The Examiners also noted that, in the event of an emergency, Baron will employ its emergency shutdown procedures and post-event site security measures and that Baron will immediately notify State and local officials and implement other manufacturer-specific safety procedures.[316] The Examiners recommended adoption of Certificate Conditions related to the submission of documentation of the Applicant's emergency procedures and final site security plans for both construction and operation phases of the Project.[317] The Examiners also recommended that we adopt proposed Certificate Condition 133, which requires Baron to maintain an inspection program for turbine blades and other components, with a report to be filed

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313 RD, p. 82; see 3/20/19 Tr. 751-753.

314 Hearing Exh. 1, Application Exh. 12(a), Appendix S. See 16 NYCRR 1001.12.

315 See Certificate Condition 52(a)(vi).

316 RD, p. 83; see Hearing Exh. 1, Application Exh. 15, Appendix W [Preliminary Emergency Action Plan]. See also Hearing Exh. 1, Application Exh. 15, Appendix V [Preliminary Health and Safety Plan] and Appendix X [Preliminary Site Security Plan].

317 RD, p. 83; see DPS Staff's Proposed Certificate Conditions 49-50, Applicant's Proposed Certificate Conditions 49-50.

annually with the Secretary that identifies any major damage, defects or other problems with the turbine blades.

Intervenor Sokolow continues to argue that risks to health and safety have not been minimized because, in her view, the appropriate risk analysis has not occurred. Intervenor Sokolow also argues that setback limits recommended by the Examiners did not consider lightning strikes and that onshore and offshore guidance is not being applied consistently. Finally, Intervenor Sokolow maintains that any engineer certifying the Facility's turbines should be internationally accredited.

We agree with the Examiners that the Project's potential impacts to public safety related to tower collapse and blade throw will be avoided or minimized through requiring the appropriate setbacks for the turbine locations. We also find that Baron's proposed QA/QC Plan is adequate and the Certificate Conditions recommended by the Hearing Examiners, which require submission of emergency procedures and final site security plans for both construction and operation phases of the Project, will avoid or minimize impacts to public health and safety related tower collapse and blade throw.[318] Similarly, we adopt proposed Certificate Condition 133, which requires Baron to maintain an inspection program for turbine blades and other components, with a report to be filed annually with the Secretary that identifies any major damage, defects or other problems with the turbine blades.

2. Ice Throw/Shedding

Based upon their review of the record, the Examiners determined that no serious accidents at any operating wind farm

[318] DPS Staff's Proposed Certificate Conditions 49-50, Applicant's Proposed Certificate Conditions 49-50.

have been reported because of ice thrown from a turbine blade.[319] While ice shedding is a potential public safety hazard, the Examiners found that the Siting Board can appropriately address the issue through adoption of appropriate setbacks as part of the recommended Certificate Conditions. The Examiners note that the "Wind Turbine Health Impact Study," prepared by an independent expert panel for the Massachusetts Department of Public Health (Massachusetts DPH Study), concluded that "ice is unlikely to land farther from the turbine than its maximum vertical extent." In any event, Baron commits to setbacks that are greater than its proposed maximum turbine height,[320] which the Examiners note, will address the concern raised by DPS Staff that, in high wind conditions, ice can be thrown from a blade beyond the maximum vertical extent when, following a turbine shut down, the ice is partially melted and the blade resumes rotating.[321]

The Examiners further noted that the selected turbines will be equipped with ice-buildup sensors designed to automatically shut down the turbines in the event of blade icing. When certain parameters are exceeded, the turbines are designed to automatically shut down for inspection.[322] This safety feature is required by the local laws of the Towns of Cohocton and Fremont.

The Examiners found that the parties' safety concerns are addressed through the setback requirements and Certificate

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319 RD, p. 84; see Hearing Exh. 1, Application Exh. 15, pp. 6-7.

320 Staff indicates that Baron adequately addressed this concern by committing to setbacks that are greater than the maximum height of the turbines. DPS Staff's Initial Brief, p. 28; Hearing Exh. 1, Application Exh. 15.

321 RD, p. 84; see DPS Staff Initial Brief, p. 28.

322 RD p. 85; see 3/20/19 Tr. 738-739, 745-746.

Condition 30, which requires turbines to adhere to applicable design standards. In addition, the Examiners found that the selected turbines will be equipped with a "cold weather package," which includes many heated turbine components and permits the turbines to safely operate at temperatures down to -30 degrees Fahrenheit and to ensure no equipment malfunctions down to -40 degrees Fahrenheit. Further, Baron testified that the turbines are shutdown automatically at -30 degrees Fahrenheit and that, before restarting the turbines, "maintenance crews are dispatched to view and inspect the turbine components, correct any issues prior to again beginning operations and bringing the equipment back to operating temperature, if needed, via internal heaters."[323]

We agree with the Examiners that impacts related to ice throw will be minimized or avoided by adoption of the recommended Certificate Conditions. Setbacks and appropriate turbine design features and engineering will ensure that public health and safety is not unduly impacted by construction and/or operation of the Facility.

3. Shadow Flicker

The regulations, 16 NYCRR §1001.15(e) and 1001.24(a)(9), require an applicant to address impacts due to shadow flicker and to provide an analysis and description of related operational effects of the facility such as visible plumes, shading, glare, and shadow flicker. Baron's shadow flicker analysis is contained in Hearing Exhibit 1, Application Exhibits 15(e)(4) and 24(a)(9), Application Appendix U, as well as in Hearing Exhibit 9, Application Update Exhibit 24(a)(9), and updated Appendix U.

[323] See 3/20/19 Tr. 755-756.

The RD explains that shadow flicker refers to the moving shadows of intermittent intensity that are cast by a wind turbine over an identified receptor. Shadow flicker typically occurs for a limited number of hours per year at receptor sites. The Examiners explained that the main concerns associated with shadow flicker are the potential risk for seizures in people who have photosensitive epilepsy and annoyance or nuisance. The Examiners also noted that the Town of Fremont raised a concern about traffic safety. Physical barriers and obstacles, such as terrain, vegetation, or buildings, situated between receptors and the turbines can reduce or eliminate the effects of shadow flicker.

The Examiners explained that there are no applicable State or federal laws or regulations setting shadow-flicker thresholds, so in performing its study Baron relied upon a threshold of 30 hours per year at non-participating receptors, which is the number of hours permitted in Condition 30 of the Cassadaga Wind Order.[324] The Examiners indicated that the Town of Fremont has set a shadow-flicker threshold of 20 hours per year at non-participating receptors,[325] which Baron used for receptors located in the Town of Fremont when it performed its updated shadow-flicker analysis. The Examiners stated that with the modified array of turbines (now 68 turbines), only four non-participating residential receptors could experience more than 30 hours of shadow flicker each year and five additional non-

[324] See Hearing Exh. 9, Updated Appendix U, p. 2.

[325] Town of Fremont Local Law No. 2 of 2018, § 8:10 (A)(18). This ordinance was enacted subsequent to the filing of Baron's original application, which had proposed a yearly limit of 30 hours.

participating receptors, located in the Town of Fremont, could experience between 20 and 30 hours per year.[326]

The Examiners noted that the Town of Fremont raised concerns that shadow flicker occurring on New York State Route 21 near Haskinville may result in a dangerous distracted-driver situation at certain times of the year.[327] The Examiners also noted that the Applicant and DPS Staff generally agreed on proposed Certificate Conditions that would require Baron to provide a Shadow Flicker Impacts Analysis, Control, Minimization and Mitigation Plan. Such plan would include: an updated shadow-flicker analysis based upon the final Project design, if necessary; a protocol for monitoring operational conditions and shadow flicker exposure; details of the shadow detection and prevention technology or operational measures; potential temporary turbine shutdowns during periods that produce flicker; and shielding or blocking measures.[328]

The Applicant supported the addition of certain caveats or limitations with which DPS Staff disagreed. The Examiners concluded that the Applicant's proposed edits do not comport with the requirement of Article 10 that the Siting Board determine that the Applicant has avoided or minimized adverse environmental impacts to the maximum extent practicable. The Examiners explained that prior to granting a certificate, the statute requires the Siting Board to make a determination regarding adverse impacts. The Examiners concluded that the Applicant's proposed caveats would allow the Certificate Holder,

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326 See Hearing Exh. 9, pp. 5-6, Updated Application Appendix U, pp. 8-9; See Applicant Initial Brief, p. 118. Baron categorizes this as "a modest shadow flicker impact." Baron Reply Brief, p. 40.

327 RD p. 88; see Town of Fremont's Initial Brief, p. 12.

328 Hearing Exh. 32, CRR-3, Certificate Condition 54.

not the Siting Board, to make the determination of what is practicable at some point after the Certificate is granted. The Examiners noted that the record demonstrates that operational measures, including curtailment are readily available.[329] The Examiners concluded that, given the limited number of receptors likely to experience shadow flicker above the proposed annual limits, curtailment when complaints regarding exceedances of the thresholds cannot be resolved appears reasonable and practicable.

Further, the Examiners agreed with DPS Staff that delaying mitigation measures for two years is excessive. The Examiners recommended that we require the Shadow Flicker Impacts Analysis, Control, Minimization and Mitigation Plan to include a requirement for curtailment or other operational measures to resolve the exceedances, to the extent that shielding, blocking or other mitigation measures are not available to resolve a complaint and the conditions leading to an exceedance of the annual limits are reasonably expected to reoccur.

The Examiners concluded that the record evidence does not support a 30-minute daily shadow flicker threshold in addition to an annual limit. They stated that although exposure to shadow flicker above a threshold level may cause some annoyance, it appears that a practical approach for predicting high annoyance has yet to be developed. The Examiners concluded that because predicting annoyance based on shadow flicker exposure is difficult, the Applicant's proposal to provide shielding or blocking measures for receptor locations that submit complaints is sufficient. The Examiners also concluded

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[329] RD, p. 92; See Hearing Exhibit 9, Updated Appendix U, p. 9 (explaining that for remaining non-participating receptors predicted to receive shadow flicker exceeding the thresholds, individual turbines could be curtailed during specific time periods to reduce shadow flicker at the receptors).

that imposition of a 30-minute daily threshold in addition to the 20-hour and 30-hour annual thresholds is unnecessary. Based on this, the Examiners recommended that the Siting Board adopt a 20-hour annual threshold for receptors in the Town of Fremont to comply with the Town's local law requirement and a 30-hour annual threshold for receptors outside of Fremont. Further, the Examiners recommended that the Siting Board reject the Applicant's edits to DPS Staff's proposed Certificate Condition 57 regarding shadow flicker for the reasons explained above, and that, with proposed Certificate Condition 57 in place, the Siting Board find that the Facility can be constructed to conform to the Town of Fremont's local law regarding shadow flicker.

Regarding the potential shadow flicker impacts at State Route 22, the Examiners recommended that we require the Applicant to consult with DOT regarding the potential impacts to State Route 21 and file with the Siting Board a summary of the consultation and the Certificate Holder's plan to address concerns DOT raises during the consultation process.[330]

Finally, the Examiners noted that the Certificate Condition requiring a compliance filing related to shadow flicker, in addition to other compliance filings required by the recommended Certificate Conditions, will ensure that Baron submits an updated analysis of impacts based on the final proposed design. The Examiners also recommended that we require the Applicant to provide updates reflecting changes in the Facility arising from new construction or other circumstances that may not be accurately reflected in the record but do in

[330] See Certificate Condition 57.

fact exist at the time the Certificate is granted.[331] These circumstances, to the extent they are reasonably ascertainable, must be considered by the Certificate Holder during final design and operation of the Facility.

On exception, the Applicant maintains that any decision regarding whether to require shadow detection and prevention technology and operational measures be postponed until after the Certificate is issued and be determined based on the specific field conditions. The Applicant states that it will make a determination regarding feasibility of detection and prevention technology and the feasibility of operational measures in its Shadow Flicker Plan submitted as a compliance filing and that DPS Staff is free to evaluate and address the determination as they would any other aspect of compliance filing with which they disagree.

In addition, the Applicant maintains that its proposed Certificate Condition, which only would require the Applicant to consider turbine shutdowns after exceedances for two consecutive years of the shadow flicker limits, is not intended to delay mitigation measures other than turbine shutdown. The Applicant argues that it may need two years to consider its available options other than curtailment and/or to negotiate with affected landowners regarding good neighbor agreements and payment of compensation.

The Town of Fremont excepts from the RD to the extent that actively mitigating any shadow flicker impacts identified on State Route 21 and documentation of such mitigation is not

[331] For example, the representation of receptor 1518 in Updated Appendix U is incorrect. The aerial image depicts a structure with a single roof ridge running its length but the two ground level images depict that structure in addition to a residence with a lengthwise ridge and a second ridge with a street facing gable.

made a mandatory compliance filing. The Town of Fremont urges the Siting Board to make it so. Intervenor Sokolow maintains that the primary methods for reducing shadow flicker are setbacks and turbine shutdowns because blinds and shades cannot address the loss of use of adjacent property.

We agree with the Examiners and adopt their recommendations regarding shadow flicker. Although the record indicates extended exposure to shadow flicker can cause annoyance and more serious impacts for individuals with photosensitive epilepsy, the recommended Certificate Conditions will avoid or minimize those impacts to the maximum extent practicable by limiting exposure to shadow flicker. We also agree with the Examiners that allowing the Applicant two years to consider its response to shadow flicker exceedance complaints is excessive. Baron's *Shadow Flicker Impacts Analysis, Control, Minimization and Mitigation Plan* shall include details of shadow detection and prevention technology and operational measures it will adopt to prevent exceedances of the applicable shadow flicker thresholds in response to shadow flicker complaints.

4. Setbacks

Information regarding the Applicant's proposed Facility setbacks is in Exhibit 6[332] and the Update to Exhibit 6.[333] The Examiners noted that wind turbine setbacks are intended to prevent turbines from being sited in areas where sensitive resources or targets would be located in the fall zone or fall-down distance, the area below a wind turbine where falling debris or ice could land in the event of a blade or tower failure, other mechanical problem or falling ice.[334] As explained

[332] Hearing Exh. 1, Application Exh. 6.

[333] Hearing Exh. 9, Updated Application Exh. 6.

[334] RD, p. 95.

in the RD, The Applicant's setback analysis was based on a total turbine height of 500 feet because both types of proposed turbines (the Gamesa G114 (2.625 MW) and the Nordex N117 (3.675 MW)) are approximately 492 feet in height.[335]

The Examiners stated that the Applicant has proposed setbacks that conform with local zoning regulations as a Certificate Condition.[336] The revised conditions also reflect the change to newly-numbered Certificate Condition 53 with respect to Town setbacks.[337]

The Examiners recommended that, with appropriate Certificate Conditions in place, including those requiring adherence to local setback requirements, the Siting Board find that the Facility can be constructed to conform to all applicable setback requirements, including those contained in local laws. The Examiners further recommended that the Siting Board adopt a Certificate Condition requiring as a compliance filing the submission of the final project layout with enough detail to verify that the Facility meets all the Towns' setback requirements and that, to the extent the setback requirements are met through landowner agreements, the Siting Board should also require the Certificate Holder to demonstrate such agreements are in place.[338]

Intervenor Sokolow maintains that an appropriate risk analysis should determine project setbacks rather than relying on standards approaches. Intervenor Sokolow appears to argue for a formalized statewide collaborative to review health and safety related to wind turbines.

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335 RD, pp. 95-96.

336 RD, p. 96.

337 RD, p. 96.

338 See Appendix A, Certificate Condition 26.

As discussed above, the setbacks required by the proposed Certificate Conditions will ensure compliance with local requirements and avoid or minimize impacts related to health and safety by the Facility. Intervenor Sokolow recommends a specific study to determine appropriate setbacks but we conclude such a test would be onerous and nothing on this record indicates that such a study is necessary. Similarly, we conclude that a statewide collaborative is not needed prior to our determination that the setbacks we require here are sufficient to protect public health and safety.

5. Noise

The Examiners recommended that we find the record to be sufficient to make the factual findings required by the Public Service Law regarding the likely impacts of noise and vibration from the Project. The application materials, as well as the record contributions from DPS Staff, DOH Staff, the Town of Fremont and Intervenor Sokolow, describe the probable environmental impacts related to noise and vibration. The Examiners acknowledged that DPS Staff objects to certain aspects of the Applicant's modeling procedures but believed that the modeling is adequately conservative and accurately predicts the noise and vibration impacts of the Facility.

We agree with the Examiners that the Applicant's modeling accurately reflects the noise impacts of the Facility and that, with appropriate Certificate Conditions in place, such impacts will be minimized or avoided to the maximum extent practicable. Although DPS Staff and other parties recommend more conservative modeling, lower noise limits, and more onerous compliance protocols, nothing in this record indicates that imposing these requirements is practicable or indeed would result in a measurable diminution to the impacts of concern.

a. Application Documents Regarding Noise

Baron's evaluations of the noise impacts resulting from construction and operation of the Facility are contained in Exhibit 19, Appendices Z-1 and Z-2 (Pre-Construction Noise Impact Assessment [PNIA]), updated Exhibit 19, Appendix Z (supplemental PNIA), and Appendix AA (updated Sound Monitoring and Compliance Protocol).

The pre-construction ambient noise analysis resulted in overall equivalent continuous average sound levels (Leq) ranging from 36 to 49 dBA during the day and 32 to 45 dBA during the night.[339] The PNIA includes descriptions of the applicable local laws related to wind turbine noise, including the Towns of Fremont, Cohocton, Wayland and Dansville.[340] The PNIA explains the sound propagation modeling that the Applicant conducted for the proposed Facility including estimating the highest one-hour Leq (1 hour) expected from the Facility according to ISO 9613-2,[341] and calculating seasonal and annualized long-term average and statistical project sound levels using the ISO 9613-2 methodology with CONCAWE[342] meteorological adjustments.

On February 1, 2019 Baron submitted a supplemental PNIA as part of its updated application. The supplemental PNIA reflected an updated array of 69 turbines and modeled two turbine types, the Gamesa G114 2.625 MW (G114) and the Nordex N117 3.675 MW (N117).[343] On March 12, 2019, attached to his rebuttal testimony, Baron Witness Kaliski submitted a Sound

339 According to the Applicant, measured sound levels were widely distributed, depending on the proximity to human activity and industry. Hearing Exh. 1, Application Exh. 19, p. 4.

340 Id., p. 9.

341 See ISO 9613-2:1996 Standard.

342 See Stipulation 19, Hearing Exh. 82.

343 Hearing Exh. 9, Updated Application Appendix Z.

Propagation Model reflecting the final proposed turbine array and turbine models (March modeling update).[344] The proposed array included 11 G114s and 58 N117s. The March modeling update employed the same short-term modeling procedures as the PNIA and supplemental PNIA but included the specific turbine models and locations and reflected an increase in participating parcels. The March modeling update indicates sound levels of 45 dBA Leq (1 hour) or less at all nonparticipating residences and that the total number of nonparticipating residences greater than 40 dBA is 63 (reduced from 88 in the Supplemental PNIA).[345] Based on the updated modeling results, the Examiners recommended that we find the Facility can meet all of the design goals and proposed noise standards with 12 wind turbines in Noise Reduced Operation (NRO) mode and that no curtailments will be required.[346]

Baron provided a summary of the long-term modeling results[347] in the March modeling update as well as the complete modeling results for the Facility[348] and for cumulative impacts including Baron and Cohocton Wind.[349] Non-participating receptors

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344 Hearing Exh. 56, KK-7, Baron Wind Modeling Report, Part 1, redacted (March 12, 2019), p. 7.

345 Id., p. 11.

346 RD, pp. 101-102. The March modeling update also includes an analysis of highly annoyed receptors listing the number of receptors at each sound level and the percentage and number of those receptors expected to be highly annoyed both indoors and outdoors. The analysis is based on the Health Canada Study with adjustments for different modeling methods. Out of 788 receptors, 15 are predicted to be highly annoyed indoors and 18 are predicted to be highly annoyed outdoors. The number of receptors above 42 dBA Leq (1 hour) is 22 with 13 at 43 dBA Leq (1 hour), 8 at 44 dBA Leq (1 hour) and 1 at 45 dBA Leq (1 hour). Hearing Exh. 56, KK-7, Table 3, p. 24.

347 Id., Table 5, p. 25.

348 Id., Table 13.

349 Id., Table 14.

with sound levels between 41 and 45 dBA L8hr-max were reduced from 87 in the Supplemental PNIA to 65 (6% of all non-participating receptors) in the March modeling update. The number of non-participating receptors with sound levels between 36 and 40 dBA Lnight was also reduced to approximately 3 percent of all non-participating receptors.

The March modeling update also contains the results of Baron's cumulative impact analysis.[350] According to the cumulative impact analysis, there are ten receptors expected to be over the 45 (dBA) Leq (8-hour) limit and/or 40 (dBA) Lnight under worst-case conditions. For each receptor over the design goals, the contribution from the Facility is 9 dBA or more lower than the cumulative sound level which, according to the Applicant, indicates that the Facility does not contribute significantly to the cumulative sound level.

The Applicant, at the request of DPS Staff, also provided a modeling report based on a short-term design goal of 42 dBA Leq (8-hour) on April 1, 2019.[351] According to the Applicant, such a design goal would require the elimination of two additional turbines and 21 turbines in NRO. The Applicant indicated these results would prevent development of the Facility.[352]

b. Design Goals and Regulatory Limits

The Examiners recommended the following design goals for the Project:

i. 45 dBA L8h at night at non-participating homes;

ii. 55 dBA L8h at night at participating homes;

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350 Id., p. 26.

351 Hearing Exh. 300, Confidential 42, dBA Modeling Report (April 1, 2019).

352 3/22/19 Tr. 118.

iii. 40 dBA Lnight, outside at non-participating homes;

iv. 50 dBA Lnight, outside at participating homes;

v. 55 dBA L1h at night within 150 feet of a road at nonparticipating parcels unless there is a more stringent Town property line limit;[353]

vi. 65 dBZ L1h at 16 Hz, 31.5 Hz, and 63 Hz full octave bands;

vii. 5 dB tonal penalty; and

viii. substation noise 40 dBA L1h at nonparticipating sensitive sound receptors minus an assumed 5-dB tonal penalty.

The Examiners recommended that we find that the proposed noise limits are consistent with the limits contained in the local laws of the Towns of Fremont, Cohocton, Dansville and Wayland relating to wind turbine noise and that we conclude they will minimize annoyance and complaints and are protective of human health and the environment.[354]

DPS Staff maintains on exceptions that the noise impacts from the Facility may be greater than indicated in the Applicant's modeling.[355] DPS Staff reiterates that the Applicant should not apply corrections to the CONCAWE based on the results of the ISO 9613-2 modeling or introduce random numbers in order to model a normal distribution. The Town of Fremont excepts from the RD to the extent that it does not recommend noise standards, limitations and certificate conditions requested by DPS Staff, and urges the Siting Board to adopt those requested by DPS Staff.

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[353] The Applicant states that the March modeling update assures that the 55 dBA L1h design goal was met at all property lines, not just those within 150 feet of the road. Baron's Initial Brief, p. 90.

[354] RD, p. 104; see Applicant's Initial Brief, pp. 87-88.

[355] DPS Staff's Brief on Exceptions, p. 2.

In its Brief Opposing Exceptions, the Applicant argues that DPS Staff has failed to demonstrate that the adjustments the Applicant applied to its modeling will lead to underpredictions. The Applicant argues that even with the corrections added, its annualized modeling is more conservative than the short-term worst-case modeling using ISO 9613-2 only. The Applicant asserts that considering the extent that the ISO 9613-2 modeling algorithm is validated for the parameters used by the Applicant, DPS Staff's assertion that a more conservative modeling procedure will understate impacts simply does not make sense. The Applicant also argues that DPS Staff obscures the purpose of its adjustments by calling the method "random numbers." The Applicant claims that adding the numbers to the modeled results considers modeling and sound power measurement uncertainty on an hour by hour basis and results in a more conservative approach.

Intervenor Sokolow continues to favor DPS Staff's recommendations as more protective and asserts that, unless the expertise of DPS Staff is followed, noise impacts are unlikely to be mitigated appropriately. Intervenor Sokolow argues for adoption of DPS Staff's regulatory limits or a postponement of the Project until more research can be completed on noise impacts from wind turbines.

We agree with the Examiners that the design and regulatory noise limits in Certificate Conditions 68 and 72 are consistent with the limits contained in the local laws of the Towns of Fremont, Cohocton, Dansville and Wayland relating to wind turbine noise. We further conclude they will minimize annoyance and complaints and are protective of human health and the environment.

c. WHO 2018 Guidelines

The Examiners recommended against applying the WHO 2018 guidelines to this case for several reasons. First, the Examiners stated that the WHO 2018 guidelines were issued more than a year after the parties entered into stipulations describing the nature of the studies and analysis the Applicant would provide and approximately a year after filing of the application. According to the Examiners, applying the limits after-the-fact may risk prejudicing the Applicant and may create an unnecessary level of uncertainty for other developers and potential early investors by creating a credible concern that the standards applied could change in any number of ways during project development. The Examiners also expressed concern that without enough notice or stakeholder discussion, applying the WHO 2018 guidelines could also create difficulty for other parties in understanding the practical environmental impacts related to complex and technical issues such as sound propagation.

The Examiners also found that the WHO 2018 guidelines would be difficult to apply as regulatory limits. The Examiners pointed out that the guidelines themselves state that "the acoustical description of wind turbine noise by means of *L*den or *L*night may be a poor characterization of wind turbine noise and may limit the ability to observe associations between wind turbine noise and health outcomes."[356] Further, the Examiners noted that DOH Staff acknowledges that the Lden descriptor is challenging to monitor for compliance and believed that the Applicant's proposed design goals and regulatory limits would avoid serious health impacts, so that imposing lower limits was unnecessary.

[356] RD, p. 108; see Hearing Exh. 121a, MMC-4, p. 106.

The Examiner's further noted that the recommendation for wind turbine noise in the WHO 2018 guidelines is a conditional recommendation and explained that conditional recommendations, by definition, require "a policy-making process with substantial debate and involvement of various stakeholders."[357] The Examiners explained that the conditional nature of the recommendation was based on "the low quality and heterogenous nature of the evidence" as well as factors related "to values and preferences, benefits and harms, resource implications, equity, acceptability and feasibility."[358]

On exceptions, DPS Staff acknowledges that the WHO 2018 recommendation of 45 dBA Lden is conditional because it is based on "low quality" evidence. DPS Staff further acknowledges that the conditional recommendation "leaves room for debate and additional studies may be required." In any event, DPS Staff believes the recommendation should be brought to the attention of the Siting Board.[359]

Intervenor Sokolow maintains on exceptions that the WHO 2018 guidelines should be applied. Intervenor Sokolow also argues that this project is unique and therefore comparisons to the Cassadaga Wind Project are not constructive.

In its Brief Opposing Exceptions, the Applicant continues to argue that the WHO 2018 guidelines should not be adopted as regulatory limits. The Applicant acknowledges the WHO found there may be an increased risk of annoyance below 45 dBA Lden but the risk was not significant enough to be included in the guidelines. The Applicant further acknowledges that the baseline percentage of noise annoyance from even very low wind

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[357] RD, p. 109.

[358] RD, p. 109.

[359] DPS Staff's Brief on Exceptions, p. 3.

turbine noise levels is not zero, but points out that windows are more likely to be closed due to road noise than other noise sources and that even at the highest sound level bin (40 to 46 dBA), respondents were more likely to hear road traffic (82%) than wind turbines (81%).

Although we agree that the WHO 2018 guidelines should not be imposed on Baron, we disagree with the Examiners that the guidelines should not apply simply because they were issued after Baron filed its application. Instead, we decline to apply the guidelines because of the limitations of the guidelines themselves. As described by the Examiners, the acoustical description *L*den may not be the best descriptor to characterize wind turbine noise and is challenging to monitor for compliance. Moreover, the WHO 2018 guideline recommendation is conditional due to its reliance on low quality data. Based on the record in this proceeding, application of the WHO 2018 guidelines is unnecessary in order to avoid or minimize the Facility's impacts related to noise and, for the reasons described above, may not be practical.

d. Absolute Noise Limits

The Examiners recommended that we find that the Facility's contribution to cumulative noise impacts will be minor. The recommendation is based on the March modeling update, which identifies only five receptors where the cumulative wind turbine noise impacts are likely to exceed 45 dBA L1h. The March modeling update further indicates that all five of those receptors were already over 45 dBA L1h due to sound from the existing Cohocton Wind Farm. According to the Examiners, the Facility causes a less than 1 dBA increase in the total turbine noise impacts at those receptors. The Applicant indicates that most people are unable to perceive a 1 dBA

difference.[360] The Applicant argues that the modeled increase is reasonable particularly because the existing wind project already causes impacts over 45 dBA L1h.

The RD also noted that the Cohocton/Dutch Hill Wind Project is in the process of repowering. The Applicant believes that with more modern turbines, the sound impact from the Cohocton/Dutch Hill Wind Project will reduce cumulative impacts on the five identified receptors.

Intervenor Sokolow argues that the pre-construction noise monitoring was contaminated by loud noises at two monitoring positions and that the increase over background noise due to the Facility will be significant.

We agree with the Examiners that the issue of cumulative impacts from multiple wind farms is important to consider in analyzing the probable environmental impact of a proposed generating facility. We also agree that the proposed Facility does not cause any of the limited cumulative exceedances and does not contribute significantly to the cumulative noise levels modeled by the Applicant. Therefore, we will not adopt any Certificate Conditions related to cumulative noise for the proposed Facility. Similarly, we do not find Intervenor Sokolow's concerns regarding pre-construction monitoring contamination to be supported by the record or to require additional testing or monitoring.

e. Short-term Limits

The Examiners recommended that we adopt a short-term regulatory limit of 45 dBA Leq (8-hour) at non-participating homes and 55 dBA Leq (8-hour) at participating homes with a 5 dBA tonal penalty. According to the Examiners, this limit is below or equal to the applicable local law standards, is well

[360] See 3/21/19 Tr. 810.

below the threshold for hearing impairment or speech interference and is less than or equal to the most applicable DEC guidelines. This is the same short-term limit imposed by the Siting Board in the Cassadaga Wind Order. The Examiners recommended that we find that the limit is protective of human health, minimizes quality-of-life issues and "effectively minimizes annoyance and complaints."[361]

DPS Staff maintains on exceptions that short-term limits of 42 dBA Leq [8-hour] at non-participating residences and 52 dBA Leq [8-hour] at participating residences have merit based on any of the WHO guidelines, independently. DPS Staff continues to argue that an appropriate outdoor-to-indoor attenuation is between 10-dBA to 12-dBA. DPS Staff argues that the Examiner's incorrectly rejected its position regarding building envelope attenuation. First, DPS Staff argues that the Examiners incorrectly concluded that the worst-case noise impacts from the Facility are unlikely to occur during the summer when residential windows are more likely to be open. In support, DPS Staff points to the Applicant's Supplemental PNIA, which DPS Staff claims clearly demonstrates that the summer and winter worst-case noise levels are typically within 1 dBA of each other at the most impacted receptors. DPS Staff also relies on the Applicant's meteorological data to indicate that wind speeds producing maximum turbine sound power levels may occur during the summer.

On exceptions, DPS Staff further argues that its recommendation of 42 dBA Leq [8-hour] and 52 dBA Leq [8-hour] correctly ignored the effect of atmospheric stability on noise propagation and that its recommended short-term limits are needed to achieve the 40 dBA Lnight-outdoor limit recommended in

[361] Applicant's Initial Brief, p. 99.

WHO-2009. Specifically, DPS Staff argues that the Examiners' conclusion that its calculations are overly conservative because they ignore variations due to wind direction and number of turbines contributing to modeled noise levels is based on "misstatements" by the Applicant.[362]

In support of its argument, DPS Staff quotes Mr. Kaliski's testimony during cross-examination that "wind direction alone has a small impact in the measured sound However, wind direction has a significant effect on wind shear, which significantly affected the measured level."[363] DPS Staff also quotes extensively from an article entitled "Accuracy of Noise Predictions for Wind Farms"[364] to argue that the differences between noise levels measured under downwind conditions are only 0.2 to 1.5 dBA higher than noise measured under all wind conditions. DPS Staff argues that the article reaffirms Witness Moreno's position that wind turbine noise is not directional at all frequency bands and that the degree of directionality of wind turbine noise impacts depends on the number of turbines impacting a receptor and the distances between those turbines and the receptor.

DPS Staff further argues that wind shear, temperature gradient, and turbulence do not have a significant effect on noise propagation from wind turbines. DPS concludes that meteorological factors should not be considered in calculating equivalences and discussing long-term regulatory limits for wind turbine noise. DPS Staff maintains that if all the meteorological factors are ignored, it calculates that the

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362 DPS Staff's Brief on Exceptions, p. 6.

363 3/22/2019 Tr. 36-37.

364 Hearing Exh. 287.

short-term limits must be 42 dBA Leq [8-hour] to achieve the WHO 2009 recommendation of 40 dBA Lnight-outdoor.

In opposition, the Applicant claims that while DPS Staff does not clearly state its method for calculating the difference between long-term and short-term noise descriptors, it appears that DPS Staff employed an approach like that used in the Netherlands. The Applicant argues that if that is the approach DPS Staff attempted to employ then it incorrectly used the methods and made errors in their calculations. The Applicant argues that the Netherlands method uses a different set of modeling parameters to represent propagation conditions than those apparently employed by DPS Staff. The Applicant indicates that if the proper parameters were used, the sound levels predictions would be lower under the Netherlands method. Further, the Applicant states that it appears DPS Staff incorrectly calculated the annual average sound power. According to the Applicant, if the annual average sound power is calculated correctly and uncertainty is considered, which the Netherlands method does not account for, the difference between the short-term maximum and long-term nighttime average sound levels are like those modeled by the Applicant.

In its Brief Opposing Exceptions, the Applicant challenges DPS Staff's claim that Baron is wrong in asserting that the loudest conditions from the Facility and open windows are unlikely to occur simultaneously. The Applicant claims that DPS Staff's assertions are based on a misunderstanding of the data. The Applicant explains that its position is based on the maximum seasonal 8-hour Leq, not the statistical sound levels (L10), and when comparing the highest 8-hour Leq for the winter versus the summer, in most cases for the most impacted receptors, the maximum summer value is lower than the maximum winter value. The Applicant acknowledges that this information

was not presented directly in the PNIA or Supplemental PNIA, but it claims that it can be derived from the raw data it provided to DPS Staff. The Applicant speculates that DPS Staff's different results could result from its failure to convert wind speed data from 10 meters to hub-height.

The Applicant continues to argue that DPS Staff incorrectly dismisses the impact of meteorological conditions on noise propagation. The Applicant claims DPS Staff uses a narrow scope of the scientific literature to argue otherwise. The Applicant explains in some detail that DPS Staff's conclusions regarding meteorological factors are overstated and overly broad.[365] The Applicant provides quotes from various hearing exhibits including peer reviewed articles and the Massachusetts Study on Wind Turbine Acoustics,[366] which indicate that some meteorological conditions impact sound propagation including "sound speed profile."[367] The quoted references also indicate that the impact of meteorological conditions on sound propagation increases with increasing distance between the source and receptor. The Applicant also argues that DPS Staff takes too narrow a view of the articles it relies on in concluding definitively that meteorological factors do not affect noise propagation and that the articles themselves contradict DPS Staff's overly conservative view.

In opposition, DPS Staff continues to advocate for a lower short-term limit of 42 dBA Leq (8-hour) for non-participating residences and 52 dBA Leq (8-hour) for participating residences. DPS Staff points out that DOH Staff,

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[365] Baron's Brief Opposing Exceptions, pp. 8-11.

[366] See Hearing Exh. 113, MMC-5.

[367] Sound speed profile is a function of relative wind direction, the change in wind speed by height, and the change in temperature by height. Id., p. 187.

Intervenor Sokolow and the Town of Fremont support the lower level for non-participating residences. DPS Staff states that if these lower limits are applied, there is no need to address amplitude modulation.

We agree with the Examiners that, based on this record, the appropriate short-term limit to avoid and minimize noise impacts from the Project to the maximum extent practicable is 45 dBA Leq [8-hour] at non-participating homes and 55 dBA Leq (8-hour) at participating homes with a 5 dBA tonal penalty. DPS Staff's arguments for lower short-term limits are not convincing. As described above, we conclude that the WHO 2018 guidelines are not appropriately applied to this Facility.

DPS Staff's claim that meteorological conditions are completely irrelevant is overly conservative. Some of the articles relied on by DPS Staff indicate that meteorological conditions do impact noise propagation.[368] DPS Staff's reliance on the small differences in results between noise level measurement protocols appears inapt. The quote provided by DPS Staff states that propagation loss under upwind conditions are different than downwind conditions, and the small difference in measurement results relied on by DPS Staff is a result of different positions of the receptors in relationship to multiple turbines.[369] Moreover, we are further assured that Baron's modeling procedures, including consideration of meteorological factors, are unlikely to result in significant underpredictions based on Witness Hessler's testimony that the modeling is reasonably conservative and otherwise adheres to high professional standards.

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[368] Hearing Exh. 113, MMC-5, p. 187, Hearing Exh. 287, pp. 12-13.

[369] See DPS Staff's Brief on Exceptions, p. 8.

Similarly, we agree with the Examiners that a reasonable assumption for indoor/outdoor noise attenuation is 15 dBA. Although a large number of variables may impact actual attenuation, the record is sufficient for us to conclude that an assumption of 15 dBA will avoid or minimize noise impacts to the maximum extent practicable.

The record is not clear regarding the appropriate application of the Netherlands method. Therefore, we do not rely on arguments based on the Netherlands method in making our determinations regarding noise impacts.

f. Long-term Limits

The Examiners recommended that we adopt long-term design goals of 40 dBA Lnight outside at non-participating homes and 50 dBA Lnight outside at participating homes. They do not recommend adoption of a long-term regulatory limit. The Examiners found that the monitoring requirements associated with confirming compliance with long-term regulatory limits are onerous and excessive because the Applicant's modeling indicates that no receptor will be subject to levels exceeding the design goals. The Examiners agreed with Witness Hessler that the updated modeling "is reasonably conservative, exhaustive, thorough and adheres to high professional standards."[370] The Examiners also found that no standard exists for measuring wind turbine noise for an annual average and that a long-term regulatory limit will have little effect on annoyance and complaints which will be generated by short-term noise events lasting minutes or hours and not years.

Similarly, the Examiners recommended that we reject arguments against use of NROs during modeling. They found that modern wind turbine design incorporates NROs and are confident

[370] 3/25/19 Tr. 27.

that NROs can function as designed in order to meet the design and regulatory limits for this Facility.

On exceptions, DPS Staff maintains that the Examiners incorrectly determined its motivation in recommending a long-term regulatory limit. Staff argues that its assumptions and results are supported by its analysis as explained in the testimony of DPS Staff Witness Moreno-Caballero. Further, DPS Staff argues that the Examiners erred in relying on Witness Hessler's testimony that the Applicant's updated modeling "is reasonably conservative, exhaustive, thorough and adheres to high professional standards."[371] DPS Staff argues that it is significant that the Examiners apparently failed to also consider Witness Hessler's testimony recommending an "ideal design goal" of 40 dBA "or at least something approaching that."[372]

DPS Staff maintains on exception that the Examiners erroneously concluded a long-term regulatory limit is unlikely to avoid or minimize impacts beyond those avoided or minimized by the recommended short-term limit. DPS Staff argues that the Examiners are confused as to which guidelines are intended to avoid which health impacts. DPS Staff states that the WHO-2009 recommended limit of 40 dBA Lnight outdoor is intended to avoid negative effects on sleep. DPS Staff further argues that the Examiners failed to consider the fact that the WHO 1999, WHO 2009 and WHO 2018 guidelines are complimentary and that each relates to a different potential adverse health effect.

In reply, the Applicant argues that the 40 dBA limit recommended by Witness Hessler is a long-term limit, similar but not identical to the Lnight-outside recommended by WHO 2009.

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[371] 3/25/19 Tr. 27.

[372] 3/25/19 Tr. 26.

The Applicant states that its modeling indicates that the Facility will meet that limit at all non-participating receptors. The Applicant continues to object to a long-term regulatory limit due to its view that long-term sound monitoring is difficult and uncertain.

Further, the Applicant claims the WHO 1999 and WHO 2009 studies are community noise guidelines that do not consider wind turbine noise and the WHO 2009 lowest observed adverse effect level is based on transportation noise. The Applicant argues that the guidelines therefore are not relevant for sleep disturbance from wind turbines. The Applicant notes that the Health Canada studies, which looked specifically on sleep disturbance related to wind turbine noise, found no statistically significant relationship between wind turbine sound level and sleep disturbance below a long-term average sound level of 46 dBA.

The Town of Fremont excepts from the Examiner's recommendation against the long-term regulatory noise limits sought by DPS Staff, arguing that the quality of the modeling is a separate and distinct issue from the need for regulatory noise limits. The Town of Fremont points out that Witness Hessler continued to recommend a noise limit design goal of 40 dBA for the Project in his testimony. The Town of Fremont further argues that the long-term regulatory limit is more consistent with the 42 dBA Leq (8-hour) maximum noise limits for non-participating residences requested by the DPS Staff than the 55 dBA Leq (8-hour) maximum noise limit recommended by the Hearing Examiners.

We agree with the Examiners that a long-term design goal of 40 dBA Lnight outdoor is appropriate and that there is no need to impose a long-term regulatory limit. Indeed, we conclude, based on the record before us, that a long-term

regulatory limit would be impractical to enforce. DPS Staff appears to acknowledge the difficulties in monitoring compliance with long-term limits by, at least at one point in the proceeding, offering a compliance protocol that eliminates long-term monitoring.[373] We conclude that the short-term regulatory limits and the various design limits imposed by the Certificate Conditions will minimize or avoid noise impacts to the maximum extent practicable.

g. Ambient Noise-Based Limit

The Examiners found insufficient information in the record regarding the protectiveness of an ambient-noise based limit or the practical implications of applying one. Therefore, they did not recommend the Siting Board impose an ambient-based noise limit on the Facility. No parties excepted to this recommendation and we therefore adopt it.

h. Amplitude Modulation

The Examiners found that the Certificate Condition proposed by the Applicant and DPS Staff are sufficient to avoid or minimize impacts related to amplitude modulation.[374] No parties excepted this recommendation. Therefore, we adopt it.

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[373] DPS Staff only supports the alternative compliance protocol if the Siting Board also adopts its alternative set of certificate conditions. We do not conclude, as implied by the Applicant (See Baron's Initial Brief, p. 107), that DPS Staff's motivation in recommending extensive monitoring if it does not get its way regarding short-term regulatory limits, is punitive. We will note, however, that DPS Staff's presentation of various options, each with apparent trade-offs (only some of which are fully explained) did little to clarify the inherently complicated issues related to noise impacts.

[374] See Baron's Reply Brief, Appendix A, pp. 33-34 and DPS Staff's Initial Brief, Appendix A.

i. Low-frequency Sounds

The Examiners recommended that we adopt design and regulatory limits of 65 dBZ Leq-1-hour for the 1/1 octave band sound levels for the 31.5 Hz and 63 Hz (low frequency) and a design goal of 65 dBZ Leq-1-hour for the 1/1 octave band sound level of 16 Hz. The Examiners also recommended that we adopt the procedures for vibration test procedures in ANSI S2.71 as part of the overall post-construction and monitoring protocol applied to the Facility. According to the Examiners, the vibration testing procedures will address concerns related to the Facility's potential to induce vibrations and rattles in building which the parties agree is the impact of most concern related to infrasound (16 Hz). It will also address vibrations or rattles from the 31.5 Hz and 63 Hz octaves.

The Examiners found that noise in the 31.5 Hz and 63 Hz octaves, in addition to potentially causing vibration and rattles, is audible and therefore, may cause annoyance through direct perception of the receptor.[375] The Examiners concluded that regulatory limits at the audible octaves, in addition to the complaint response requirements should fully address concerns related to low-frequency noise.

We agree with the Examiners that the recommended limits will address, avoid or minimize impacts related to low frequency sound, which can often be perceived as intrusive, to the extent practical. Therefore, we will adopt the design and regulatory limits in Certificate Conditions 68 and 69 related to low-frequency.

[375] See Hearing Exh. 1, Application Appendix Z, p. 184 (concluding based on a literature review shows "that wind turbine sound is often perceived as more intrusive than other environmental sound sources, this is due to tonal content, AM, and some low-frequency content.").

j. Compliance Protocol

Except for the monitoring of compliance with the low frequency regulatory limits explained above, and application of ANSI S12.9 Part 3 Clause 7.3 as described below, the Examiners recommended that the Siting Board adopt a Certificate Condition requiring use of the Applicant's proposed Post Construction Monitoring and Complaint procedures.

The Examiners noted that ANSI S12.9 Part 3 Clause 7.3 includes a provision designed to account for uncertainty related to background sound level measurements taken during project shutdowns at different times relative to the measurements that include both background sound and project sound. According to the Examiners, the standard specifies that if measurements are being used to assess compliance with a limit or standard, this uncertainty should be debited against the project and for measurements related to violations, the uncertainty is credited to the project.

The Examiners recommended that the standard be applied as it is written. Specifically, the Examiners recommended that during the Applicant's post-construction compliance monitoring regime, the uncertainty should be applied against the Facility in order to ensure an appropriate level of certainty that the regulatory limits are being met. If the results indicate the Facility is not in compliance, the Examiners recommended that we require operational adjustments until compliance can be demonstrated. The Examiners further recommended that once compliance monitoring is complete, if additional monitoring is performed in response to a complaint, the uncertainty should be applied in favor of the Facility. The Examiners concluded that this approach recognizes the importance of full compliance as demonstrated through post-construction monitoring while

appropriately assigning the uncertainty such that the Facility is not subject to undue risk of the consequences of violation.

With regard to DPS Staff's suggested monitoring protocols, the Examiners found that DPS Staff did not justify the additional difficulty, cost and uncertainty related to its recommended data collection conditions[376] and other proposed requirements. The Examiners found that the Applicant's modeling is sufficiently conservative such that the additional restrictions and precautions in the monitoring protocol proposed by DPS Staff are unnecessary to ensure noise impacts are avoided or minimized to the extent practicable. The Examiners concluded that under DPS Staff's recommended compliance protocol, the impacts may very well be lessened but the record does not demonstrate that achieving lower impacts will be practicable, or even significant.

On exceptions, DPS Staff claims that treatment of the uncertainty factor in ANSI S12.9 Part 3 Clause 7.3 should depend on whether the Applicant or DPS Staff is performing the post-construction monitoring. DPS Staff argues that the uncertainty should be applied against the Facility when the Applicant is conducting the first-year post-construction compliance and whenever the Applicant is testing in response to a noise complaint. According to DPS Staff, the only times the uncertainty should be applied in favor of the Facility are situations involving a complaint that warrants DPS Staff intervention.

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[376] DPS Staff's protocol appears to require optimum conditions and provides few, if any, limitation on how long the monitoring activity must continue until those conditions occur. This level of uncertainty does not appear to benefit the Applicant, the community or any potential complainants seeking resolution requiring additional monitoring.

In opposition, the Applicant seeks additional clarification regarding who will perform compliance monitoring after the initial monitoring phase is complete. The Applicant maintains that the ANSI violation standard, with the uncertainty applied in favor of the Facility, is appropriate for all compliance monitoring.

DPS Staff also takes exceptions to the Examiners' characterization of its monitoring protocol as unnecessarily burdensome. DPS Staff notes that the Applicant's protocol includes testing with 20 clean shut-downs and DPS Staff's simplified protocol requires 48 hours of testing which may be achieved in 24 clean shut-downs including 2 hours of valid data per shutdown. DPS Staff also complains that the Examiners ignored its redline critique of the Applicant's Compliance Monitoring and Complaint Resolution Plan.[377]

On exceptions, the Applicant maintains that there is no basis in the record for applying separate ANSI standards during post construction monitoring. The Applicant argues that applying two different standards would lead to confusion and claims the most straightforward approach would be to call a "compliance" test a "violation" test and apply the uncertainty in favor of the Facility to demonstrate that the Facility does not violate the imposed noise limits. Alternatively, the Applicant suggests reporting the results of both methods for the initial compliance test and require mitigation only if the Facility "violates" the noise limit with the uncertainty applied in its favor.

The Applicant further requests that the Siting Board clarify that DPS Staff must follow the same post-construction testing or monitoring procedures that the Certificate requires

[377] Hearing Exh. 121.

of the Applicant in order to avoid confusing and/or conflicting results. Relatedly, the Applicant argues that anyone performing monitoring on behalf of DPS Staff should be required to have the expertise and certifications to perform the testing, including membership in a relevant acoustical society such as the Acoustical Society of America (ASA) or the Institute of Noise Control Engineering (INCE-USA). The Applicant states that the monitoring should be conducted by or under the supervision of an individual who has been board certified by the INCE.

DPS Staff, in opposition, disagrees with the Applicant's characterization of ANSI S12.9 Part 3 section 7.3 as containing two standards. DPS Staff argues that there is only one standard with two ways to apply the uncertainty. DPS Staff also argues that both compliance and violations are serious. DPS Staff proposes edits to Certificate Conditions that would apply the uncertainty factor against the Facility during sound compliance tests or in response to any complaints received. The uncertainty factor would be applied in favor of the Facility when DPS Staff was testing for violations.

The Town of Fremont excepts from the RD to the extent that it does not accept and recommend the post-construction compliance and complaint resolution protocol requested by DPS Staff, and urges the Siting Board to adopt those compliance protocol measures. The Town of Fremont argues that DPS Staff presented substantial evidence showing that the Applicant's proposed compliance testing protocol is not reasonably protective for mitigation and prevention of noise impacts.

Intervenor Sokolow is also concerned that noise complaints be readily addressed and advocates for an independent working complaint system with active mitigation for the Project, similar to New York City's 311 system.

DPS Staff strongly opposes adoption of the Applicant's proposed post-construction monitoring protocol. DPS Staff continues to argue that the Siting Board should apply to the Facility its compliance protocol,[378] and its complaint resolution protocol,[379] submitted with its Reply Brief.

DPS Staff also opposes the Applicant's request that all post-construction monitoring of the Facility be conducted by or under the supervision of an individual board certified through the INCE. DPS Staff points out that its Utility Engineer Specialist has extensive experience in sound monitoring and is a member of the Acoustical Society of America and the INCE but that no member of DPS Staff is board certified by the INCE. DPS Staff argues that such a request is untimely and is not required by the Public Service Law. DPS Staff further argues that the on-line INCE certification is not specific to wind turbine noise, so that a person could be board certified and have no knowledge of wind turbine noise.

We agree with the Examiners that the Applicant's post-construction monitoring protocol is sufficient to ensure compliance with the regulatory limits imposed here. However, we disagree with the Examiners' recommendation regarding application of the uncertainty in ANSI Standard S12.9 Part 3 section 7.3. The Examiners' recommendation would shift the application of uncertainty depending on when monitoring took place. This may cause confusion and we agree with DPS Staff's statement that it is the Certificate Holder's burden to demonstrate compliance. Therefore, we will adopt Certificate Conditions 69 and 70, which, among other things, require the Certificate Holder to apply the uncertainty factor in ANSI S12.9

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[378] DPS Staff's Reply Brief, Appendix D, not the one Staff also proposed in Appendix C.

[379] Appendix I.

Part 3 section 7.3 against the Facility during Sound Compliance Tests and with respect to tests performed in response to complaints, as described in Certificate Condition 71. To the extent that DPS Staff performs sound monitoring of the Facility for the purposes of demonstrating the Facility is in violation of the requirements of the Certificate, the uncertainty shall be applied in favor of the Facility. DPS Staff shall follow the monitoring protocol we approve here in order to demonstrate a violation of the noise limits imposed by this Order.

k. Minimization and Avoidance

The Examiners recommended that we conclude the recommended short-term regulatory limits and post-construction monitoring and compliance protocol discussed in prior subsections will avoid or minimize the expected impacts related to noise and vibration.

The Applicant maintains on exceptions that sound power limits are unnecessary because, according to the Applicant, only the sound pressure levels at the receptors is important in determining the potential impact of the Project in terms of noise. The Applicant further argues that if a sound power level is applied the Certificate Condition language should be clarified by removing the phrase “at any wind speed,” claiming that this could be interpreted to mean that the overall level cannot be higher at any wind speed, even if the wind speed is well below where the maximum sound power is produced.

The Applicant also excepts to having to follow the IEC 61400-11 standard regarding reporting sound power levels. The Applicant claims the lack of alternatives is problematic if the manufacturer of the turbine it selects does not provide sound power levels pursuant to the specified standard. The Applicant suggests that any certificate condition limiting sound power levels provide for using either IEC 61400-11 (for a single

turbine) or IEC 61400-14 (for a batch of wind turbines). Finally, the Applicant recommends adding to condition 68(d)(ii): "If a higher sound power wind turbine is chosen, then sound modeling must be done to show similar or lower impacts."

DPS Staff agrees that sound power limits are not necessary and recommends eliminating the recommended Certificate Condition 68(d)(ii). DPS Staff further agrees with the Applicant's proposed edits to Condition 68, creating a section 68(e) and modifying the language to require revised modeling to demonstrate compliance with all of Certificate Condition 72 rather than only portions of that Certificate Condition.

We adopt the recommendation by the Applicant and DPS Staff to eliminate the requirements of recommended Certificate Condition 68(d)(ii), number a previously unnumbered section 68(e), and require revised modeling to demonstrate compliance with all of the regulatory limits of Certificate Condition 72.

l. Property Boundaries

The Applicant proposes a 55 dBA L1h at night within 150 feet of a road at non-participating parcels unless there is a more stringent Town property line limit. The Examiners recommended that the limit be applied to all property lines, not just those within 150 feet of the road. According to the Examiners, the 150-foot limitation is arbitrary.[380] Further, the Examiners noted this should not be a significant burden on the Applicant, as the regulatory limit appears to be met already based on the March modeling update.

The Applicant maintains on exceptions that the design goal of 50 dBA L(night-outside) relating to noise limits "across

[380] See Case 14-F-0490, supra, Order Granting Certificate of Environmental Compatibility and Public Need, with Conditions (January 17, 2018).

any portion of a nonparticipating property. . .” is problematic.[381] The Applicant states that it addresses non-participating properties by modeling individual worst-case locations but does not show sound levels or “any location.” The Applicant recommends clarifying the Certificate Condition to recognize that the sound pressure level will be modeled at the worst-case location within any property, as determined using the Certificate Holder’s sound contour figure, or as updated with the final turbine layout.

In reply, DPS Staff objects to the Applicant’s approach because it will require selecting hundreds of discrete receptors for computer modeling and additional calculations that are expected to be difficult to review. DPS Staff further argues that the provision creates the possibility of using outdated noise contours. DPS Staff proposes to replace the 50 dBA L(night-outside) limit with a 52 dBA Leq(8-hour) for both outside any existing participating residence and across any portion of non-participating property.[382] DPS Staff claims that the difference between the long-term Lnight descriptor and the short-term noise descriptor Leq may not be 5 dBA but as low as 2 dBA. In opposition, DPS Staff also adds language to Certificate Condition 68 to ensure information necessary to review compliance filings is included in Sound Contour Drawing maps.

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[381] See RD, Appendix A, Proposed Certificate Condition 68.

[382] DPS Staff first proposed this in Witness Moreno-Caballero’s direct testimony and these limits were included in MMC-10, one of the exhibits containing certificate conditions accompanying Witness Moreno-Caballero’s testimony. The proposal was not included in either set of proposed Certificate Conditions accompanying DPS Staff Initial Brief. The 52 DBA Leq(8-hour) limit was included in two of the four sets of Certificate Conditions accompanying DPS Staff’s Reply Brief but was not discussed in the Reply Brief.

The Applicant notes that the text of the RD does not recommend against the use of NRO's during modeling. However, Recommended Condition 68 contains a provision prohibiting the incorporation of NROs in revised sound modeling which the Applicant understands to be a drafting error. The Applicant repeats its earlier arguments that NROs are routinely included in pre-construction design modeling including for the Cassadaga project and is proven, effective technology. The Applicant agrees with the Recommended Decision and believes this to be an error in the text of the recommended conditions.

DPS Staff continues to argue against NROs if the short-term regulatory limit is set at 45 dBA Leq (8-hour) but indicates that they may be acceptable if the Board establishes a lower short-term limit of 42 dBA-Leq (8-hour). However, DPS Staff recommends that if NROs are used to demonstrate compliance of the final Facility design their use in the modeling should be limited as it had previously argued.[383]

We agree with the Applicant that NROs are an accepted, reliable measure to manage noise impacts and will not prohibit or limit their use were reasonable. We conclude that the Applicant's utilization of NROs in its modeling in this proceeding is reasonable and will not impose the limitations sought by DPS Staff.

The Applicant's proposed approach for modeling noise across any portion of the non-participating properties appears reasonable. DPS Staff raises concerns that this approach will be difficult to review but rather than propose a better approach, DPS Staff takes the opportunity to argue for a lower limit across non-participating properties and outside existing participating residences. We reject DPS Staff's position as

[383] See DPS Staff Initial Brief p. 60.

unsupported in the record. Therefore, we will adopt Certificate Condition 68, which clarifies that the Certificate Holder can demonstrate compliance with the 50 dBA L(night-outside) limit across non-participating properties by demonstrating worst-case locations will comply. The Certificate Holder shall also demonstrate how it determined the worst-case locations.

F. Cultural, Historic and Recreational Resources

For reasons discussed below, we agree with the Examiners that the Project will have impacts to cultural, historic and recreational resources and that, with the appropriate Certificate Conditions in place, the impacts to such resources have been minimized or avoided to the maximum extent practicable.

1. Visual Impacts

The Examiners found that the Project will have an impact on viewsheds in and around the Project area, including changes to the visual character of existing historical and recreational resources.[384] The probable visual impacts are detailed in Application Exhibit 24 and Appendix GGG to Hearing Exhibit 1, Updated Exhibit 24 and Updated Appendix GGG to Hearing Exhibit 9, and Updated Application Exhibit 20 and Updated Appendix GG to Hearing Exhibit 9.

The Examiners noted that, in revising the Facility layout to include the underground installation of all proposed electric collection system lines, Baron has addressed those concerns raised by DPS Staff regarding visual impacts resulting from the use of overhead collection lines originally proposed in

[384] RD, p. 139.

Baron's application.[385] Recognizing that one turbine model typically is used throughout a windfarm project site to provide a high degree of uniformity in visual appearance, the Examiners cited to record evidence showing that the "two turbine models selected [by Baron] are essentially of the same size and general design," are not significantly different in overall height and blade length, and are proposed to be sited "in clusters comprised of one or the other model … to minimize any apparent visual contrast."[386] The Examiners also pointed out that Baron has agreed to take various steps to minimize the impacts from security lighting for turbines, the substation and the O&M building.[387]

In addition, as the Examiners stated, Baron and DPS Staff have agreed to various Certificate Conditions to minimize turbine visibility impacts. For example, Baron and DPS Staff have agreed to a Certificate Condition requiring that all turbines be of similar white or off-white color and have a non-reflective finish, have medium-intensity red strobe lights for aviation hazard marking and that such lighting be minimized to the extent allowable by the Federal Aviation Administration (FAA), and that advertisements, conspicuous lettering, or company logos would not be posted or used.[388] To minimize lighting impacts and avoid off-site lighting effects, Baron also has agreed to a Certificate Condition requiring it to file a detailed Facility Exterior Lighting Plan for review and approval by the Siting Board.[389]

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385 RD, p. 145; DPS Staff's Initial Brief, p. 65; 3/20/19 Tr. 118-119, 129-130

386 RD, p. 140; 3/20/19 Tr. 132-133.

387 RD, pp. 140-141; Hearing Exh. 1, Application Exh. 18, p. 4.

388 RD, Appendix A, Proposed Certificate Condition 39.

389 RD, Appendix A, Proposed Certificate Condition 50.

Because the options to minimize visual impacts to historic properties are limited, Baron has proposed in a preliminary Cultural Resources Mitigation Plan several off-set projects to provide benefits to the impacted communities' local resources.[390] As the Examiners stated, Baron has agreed to a Certificate Condition requiring it to file a Final Cultural Resources Mitigation and Offset Plan as a compliance filing. Under that Certificate Condition, Baron's final plan must be adopted by the federal permitting agency under the National Historic Preservation Act, or by the State Historic Preservation Office.[391]

Given DPS Staff's concerns about the visual impact of the Facility on the scenic quality of Loon Lake in the Town of Wayland,[392] the Examiners recommended that we adopt a Certificate Condition essentially memorializing Baron's commitment to make available $20,000 for recreational or aesthetic mitigation for the benefit of Loon Lake.[393] The Examiners' proposed Certificate Condition requires Baron to work with the Town of Wayland to develop a mitigation plan for Loon Lake.[394]

The Examiners also recommended that we adopt a Certificate Condition that would require Baron to use Aircraft Detection Lighting System (ADLS) or similar technology on its turbines and to file with the Secretary all material related to the FAA approval of lighting systems to be installed on wind turbines prior to construction.[395] As the Examiners noted, Baron

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390 RD, p. 144; Hearing Exh. 1, Application Appendix HH (as updated and filed on December 5, 2018).

391 RD, p. 144 and Appendix A, Certificate Condition 59(d).

392 3/20/19 Tr. 136-137.

393 RD, p. 142-143.

394 RD, Appendix A, Proposed Certificate Condition 60.

395 RD, pp. 141-142.

has not requested a waiver of Town of Fremont Local Law §8.10(A)(4), which requires the use of ADLS or similar technology, and therefore would be required to seek such relief from the Board if it cannot obtain FAA approval to use ADLS or similar technology on the turbines in the Town of Fremont.[396]

In addition, the Examiners recommended that we adopt a Certificate Condition regarding the use of landscape improvements or alterations to mitigate the Facility's visual impacts.[397] Although the Examiners agreed with Baron and DPS Staff that screening was not required for the Point of Interconnection (POI) substation, under the proposed Certificate Condition, after completion of construction, Baron would be required to assess the need for improvements to screen or landscape "the Project" and develop with and submit for approval to DPS Staff plans for any visual mitigation found to be necessary. Baron also would be required to submit to the Secretary a Final Landscaping Plan within one year after the commercial operation date of the Facility. The Examiners recommended that we reject Baron's position that the landscaping requirements apply only to the O&M building. The Examiners agreed with DPS Staff's view that Baron be required to assess the need for landscape improvements not be limited to the O&M building.[398]

In its Brief on Exceptions, Baron notes that despite the Examiners' recognition that landscaping requirements should not apply to the POI substation, proposed Certificate Condition 58 applies generally to "the Project," which would

[396] RD, p. 142.

[397] RD, Appendix A, Proposed Certificate Condition 58.

[398] See DPS Staff's Initial Brief, p. 10; 3/20/19 Tr. 46, 736.

include the POI substation.[399] Further, Baron states that, in its view, the landscaping plan addressed in proposed Certificate Condition 58 is intended to address "conventional" landscaping concerns requiring "the screening of comparatively low level structures from view at ground level" and not broader visual impacts resulting from shadow flicker or affecting historic properties.[400] Baron asserts that, to the extent necessary, the planting of vegetation for shadow flicker screening will be addressed in the Shadow Flicker Impacts Analysis, Control, Minimization and Mitigation Plan (proposed Certificate Condition 57). Further, Baron asserts that the Cultural Resources Mitigation and Offset Plan (proposed Certificate Condition 59) addresses mitigation and offsets for historic properties, as to which the options to minimize visual impacts are limited.[401] Baron therefore proposes that we adopt a revised Certificate Condition 58 that would address landscaping only for the O&M building. None of the parties oppose Baron's exceptions to the Examiners' conclusions regarding the use of landscape improvements or alterations to mitigate visual impacts. We find Baron's arguments persuasive and therefore modify proposed Certificate Condition 58 accordingly.

2. Non-Visual Impacts

Non-visual impacts from the construction and operation of the Facility are addressed in Application Exhibit 20, Updated Application Exhibit 20 and Appendices BB through GG and Updated Appendices CC and GG. As the Examiners stated, the construction

[399] Baron's Brief on Exceptions, p. 45.

[400] Baron's Brief on Exceptions, pp. 45-46.

[401] Baron's Brief on Exceptions, p. 46.

and operation of the Project will have no physical impacts on recreational or identified historic architectural resources.[402] The record also shows that the Project will not have any physical impact on the archaeological resources identified in Baron's cultural resources studies that meet or potentially meet the criteria for listing on the State/National Register of Historic Properties.[403]

Baron has agreed to a Certificate Condition requiring it to file plans to avoid or minimize impacts to archeological and historic resources to the extent practicable, including a Final Unanticipated Discovery Plan setting forth procedures if resources of cultural, historical, or archaeological importance are encountered during Facility construction. [404] If complete avoidance of archaeological sites is not possible, Baron will consult with the New York State Office of Parks, Recreation and Historical Preservation (OPRHP) and DPS Staff to determine if Phase II archeological investigations or mitigation are warranted.[405] The Examiners noted that, in connection with the updated Facility layout, Baron will conduct a limited additional Phase 1B archaeological survey at the revised laydown area location on Dutch Street in the Town of Fremont, when weather conditions permit.[406] If archaeological resources are uncovered at that location, Baron will confer with OPRHP regarding the implications of the discovery and assess possible changes to the Facility, if needed.[407] OPRHP has indicated that it has "no

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402 RD, p. 147; Hearing Exh. 9, Updated Application Exh. 20, p. 3.

403 Hearing Exh. 1, Application Exh. 20 and Appendix CC.

404 RD, Appendix A, Proposed Certificate Condition 59.

405 RD, p. 146.

406 RD, p. 147.

407 3/20/19 Tr. 56-57.

further archaeological concerns regarding" the updated design changes.[408]

G. Infrastructure Impacts

1. Transportation

The Examiners found that construction of the Project may result in minor delays to local traffic due to slow moving construction vehicles and increased truck traffic.[409] As recognized by the Examiners, because local area traffic volume is relatively low, the impacts on traffic will not be significant.[410] Moreover, to minimize delays to local traffic, Baron will coordinate with the relevant State, County and local municipalities to respond to any locations that may experience traffic flow or capacity issues.[411] Baron will obtain necessary State, County and local permits for road construction and use and has entered or will enter into Road Use Agreements providing that any damage to local roads will be repaired at Baron's expense.[412] Baron also will file Traffic Control Plans, a Final or Updated Route Evaluation Study, and any Host Community Agreements and/or Road Use Agreements.

As stated by the Examiners, Baron has addressed initial concerns raised by the Town of Cohocton regarding the adequacy of intersection sight distances where all turbine access roads meet public roads.[413] Moreover, we agree with the

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408 Hearing Exh. 69, p. 7.

409 RD, p. 148.

410 RD, p. 148; Hearing Exh. 1, Application Exh. 25, p. 13.

411 Hearing Exh. 1, Application Exh. 25, p. 13.

412 Hearing Exh. 1, Application Exh. 25, pp. 29-32. Baron included a sample Road Use Agreement as Application Appendix III to Hearing Exh. 1.

413 RD, p. 149; 3/20/19 Tr. 384, 388, 739.

Examiners that the Town of Fremont's concerns about proposed haul routes and its request that Baron use State and County roads as much as possible for main haul routes are adequately addressed. Baron states that it will use State and County roads "as much as possible for construction traffic within the Facility area, using town roads as the last point of access to the wind turbine locations."[414] In addition, Baron will be entering into a Road Use Agreement with the Town of Fremont that will set forth Baron's rights to local road use and obligations for road repairs.

As the Examiners stated, nearby airports and heliports have not identified any concerns with the Project,[415] and there is no evidence of potential adverse impacts to recreational air traffic. Moreover, Baron will be required to file with the Secretary updated or additional FAA permits and approval documents.[416] Finally, we agree with the Examiners that we should adopt a Certificate Condition authorizing DOT 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."[417]

No party takes exception with the Examiners' findings and recommendations. With the appropriate Certificate Conditions in place, we agree with the Examiners that any impacts that the Facility will have on transportation have been minimized or avoided to the maximum extent practicable.

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414 Hearing Exh. 1, Application Exh. 25, p. 14.

415 RD, p. 150.

416 RD, Appendix A, Proposed Certificate Condition 37.

417 RD, p. 149 and Appendix A, Proposed Certificate Condition 38(a).

2. Communications

The Examiners stated that the Project is not expected to have any adverse impacts on AM radio broadcast coverage, cable or satellite television, cellular phone service, emergency services communications, municipal/school district communications services, public utility services, or microwave systems in the Project area.[418] Nor is the Project expected to have any adverse impacts to NEXRAD (next-generation radar) or to Doppler weather radar operated by the National Weather Service.[419] The National Telecommunications and Information Administration (NTIA) of the United States Department of Commerce has not identified any concerns with air traffic control, global positioning satellite operations, military or other federal communication systems.[420]

The Examiners noted that the Project may create minor local interference with some off-air television station reception.[421] However, under proposed Certificate Condition 45, residents that experience degraded off-air television service from operation of the Facility can file a formal complaint that Baron will address through its complaint resolution procedures. If Baron receives a complaint and determines that the Project

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[418] RD, pp. 151-152; Hearing Exh. 1, Application Exh. 26, pp. 1, 3-11 and Application Appendices KKK, MMM and OOO; Hearing Exh. 9, Updated Application Exh. 26, pp. 2-3 and Updated Application Appendix NNN, p. 6.

[419] RD, p. 152; Hearing Exh. 1, Application Exh. 26, pp. 11-12; Hearing Exh. 9, Updated Application Exh. 26, p. 4.

[420] RD, pp. 152-153; Hearing Exh. 1, Application Exh. 26, pp. 11-13 and Appendix JJJ.

[421] RD, p. 154; Off-air television stations broadcast signals from terrestrially-based facilities directly to television receivers. Off-air reception does not include cable or satellite television reception. Hearing Exh. 1, Application Exh. 26, p. 3.

has resulted in impacts to existing off-air television coverage, Baron will first investigate improving reception. Baron will provide cable television or direct broadcast satellite reception systems where reception cannot be improved. The proposed complaint resolution procedure for impacts to off-air television reception is identical to the procedure adopted in the Cassadaga Wind Order.

No party takes exception with the Examiners' recommendations. We therefore adopt proposed Certificate Condition 45 to address any reception complaints resulting from the Facility.[422] With the adoption of that Certificate Condition, we find that the Facility will avoid or minimize any potential impacts on communication sources to the maximum extent practicable.

3. Electric and Magnetic Fields

The Examiners recommended that we determine that any electric and magnetic fields (EMFs) produced by the Facility will not result in any adverse environmental impacts.[423] No party disputes that Baron's initial and updated EMF studies show that the Facility will be operated "well within the EMF limits" that have been established by the Public Service Commission.[424] As the Examiners recognized, the updated EMF study identified seven unique right-of-way sections and "concluded that the calculated field strengths are below an[y] federal or New York State standard or guideline, both at maximum value and at the

[422] RD, pp. 154-155.

[423] RD, pp. 155-156.

[424] DPS Staff's Initial Brief, p. 99, citing Statement of Interim Policy on Magnetic Fields of Major Electric Transmission Facilities (issued September 11, 1990) (facility "designs which could produce higher magnetic fields that typical 345 kV lines are to be avoided.").

edge of the right-of-way."[425] Accordingly, we find that any EMFs produced by the Facility will not result in any adverse environmental impacts.

4. Interconnections

The Facility is not expected to require a gas interconnection, water interconnection or a wastewater interconnection.[426] The water supply needs for the O&M building will be addressed through an on-site water well and the wastewater disposal needs will be addressed through an on-site septic system. The Project will not require any new telecommunication interconnections and will not have any communications equipment giving rise to any potential adverse environmental impacts.[427]

5. Utilities

Interconnection of the Facility to the electric transmission system would be achieved through multiple systems.[428] The wind turbines produce power at a low voltage, which is stepped up to a medium voltage at the output of each turbine. A medium voltage collection system comprised of underground wires transmits the power to a collection substation. The substation steps the voltage up to a high voltage and a high voltage transmission line carries the power to a point of interconnection substation, which will be owned and operated by NYSEG and that will connect the Facility to the NYSEG transmission system. The Examiners recommended that we adopt various Certificate Conditions to ensure that, if constructed,

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[425] RD, p. 156; Hearing Exh. 9, Application Exh. 35, p. 1.

[426] RD, p. 157; Hearing Exh. 1, Application Exhs. 36, 38-39.

[427] RD, p. 157; Hearing Exh. 1, Application Exh. 40.

[428] Hearing Exh. 1, Application Exh. 34.

the Facility will comply with all relevant reliability standards.[429] We agree and adopt those Certificate Conditions.

In addition, as the Examiners stated, the record contains no testimony or other evidence from DPS Staff or other parties expressing specific concerns about Baron's proposed approach to managing construction as it relates to utility crossings.[430] We agree with the Examiners' recommendation that we adopt Certificate Condition 54, which requires Baron to submit compliance filings that include details of component crossings of, or co-locations with, existing Sunoco and other pipelines within the Project area. Moreover, the SEEP specifications adopted in the Certificate Conditions require Baron to file "extensive compliance filings regarding protection of existing utilities" and to file "a copy of an American Land Title Association (ALTA) survey showing locations of existing utility infrastructure."[431] With those Certificate Conditions in place, we determine that any environmental impacts that the Facility may have on utilities will be avoided or minimized to the maximum extent practicable.

H. Environmental Justice - PSL §168(2)(d)&(3)(d)

According to DEC's Geographic Information System, the closest Environmental Justice community is approximately four miles from any turbine.[432] Given that the Project is not near any recognized Environmental Justice community, the construction of the Project is not anticipated to have adverse impacts to air quality, and operation of the Project will not produce emissions

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[429] RD, p. 158 and Appendix A, Proposed Certificate Conditions 124-131.

[430] RD, p. 160.

[431] DPS Staff's Initial Brief, p. 91; see RD, Appendix B.

[432] Hearing Exh. 1, Application Exh. 28, p. 1.

or have adverse air quality impacts, the Examiners recommended we determine that construction and operation of the Project will not result in a significant and adverse disproportionate environmental impact to Environmental Justice communities.[433] No party excepts, and we adopt the Examiners' recommendation.

I. State and Local Laws and Regulations - PSL §168(3)(e)

The discussion of issues elsewhere in this Order demonstrates that, subject to appropriate Certificate Conditions, the construction and operation of the Facility will comply with applicable substantive State laws. Moreover, we agree with the Examiners that Baron's Article 10 application contains the required list of applicable procedural and substantive local laws.[434]

PSL §168(3)(e) requires the Siting Board to determine, among other things, that the facility is designed to operate in compliance with applicable State and local laws, except that the Siting Board may elect not to apply a local ordinance if the applicant demonstrates that the application of a local law would be "unreasonably burdensome in view of the technology or the needs of or costs to ratepayers whether located inside or outside of such municipality."[435]

An applicant seeking a waiver of a local law must show "with facts and analysis the degree of the burden caused by the [local law] 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 of granting

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[433] RD, p. 161.

[434] RD, p. 162; Hearing Exh. 9, Updated Application Exh. 31.

[435] PSL §163(3)(e); 16 NYCRR 1001.31(d).

the request are mitigated to the maximum extent practicable."[436] For waiver requests based upon existing technology, the applicant must demonstrate "that there are technological limitations … related to necessary facility component bulk, height, process or materials that make compliance by the applicant technologically impossible, impractical or otherwise unreasonable."[437] For waiver requests based upon factors of costs or economics, the applicant must demonstrate "that the costs to consumers associated with applying the local substantive requirement outweigh the benefits of applying such provision."[438] For waiver requests grounded in the needs of consumers, the applicant must demonstrate "that the needs of the consumers for the facility outweigh the impacts on the community that would result from refusal to apply the local substantive requirement."[439]

The Examiners recommended that we grant Baron a waiver of two provisions of the Town of Fremont's Local Law No. 2 of 2018 (Local Law), which governs the construction and operation of wind energy facilities in that town. The Examiners also recommended that we not require Baron to follow a procedural requirement in the Local Law that would require Baron to submit to the Town Board the traffic routes it proposes to use in constructing the Project.

1. Limitation of Times and Days for Construction

Section 8.10(A)(14) of the Local Law limits wind turbine construction to "the hours of 7am to 7pm Monday thru Friday with the exception of Holidays," while "allowing for

[436] See 16 NYCRR §1001.31(e).

[437] 16 NYCRR §1001.31(e)(1).

[438] 16 NYCRR §1001.31(e)(2).

[439] 16 NYCRR §1001.31(e)(3).

after-hour construction of turbine erection requiring special wind and temperature conditions not attainable during" the normal construction time period and restricted to "onsite construction only" to avoid additional construction traffic.[440] Baron requested a waiver of Section 8.10(A)(14) to allow it to have a uniform construction schedule throughout the multi-Town Project area. As the Examiners noted, the local laws of other Towns involved in the Project would not prevent Baron from construction on Saturdays. The Town of Dansville limits wind turbine construction to the hours of 7:00 a.m. to 7:00 p.m., but it does not restrict the days on which construction can occur.[441] The Towns of Cohocton and Wayland do not place any limits on Baron's construction schedule.

Baron proposed that work be allowed in the Town of Fremont from 7:00 a.m. to 7:00 p.m. from Monday through Saturday and at other time periods as needed to accommodate unusual circumstances requiring wind turbine erection activities to take place outside of the normal schedule or, upon providing notice to DPS, affected landowners and the Town, as needed to address safety or continuous operation requirements. DPS Staff supported that request. The Town of Fremont, four individual residents of the Town of Fremont, and Intervenor Sokolow opposed the request. According to the Town of Fremont, the provision at issue "exists to minimize road and traffic impact[s] on the Town during evenings, weekends and holidays, as well as to reduce construction noise and other nuisance impact[s] to the community."[442]

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[440] Hearing Exh. 9, Updated Application Appendix SSS.

[441] Town of Dansville Local Law No. 2 of 2017, §12(N).

[442] Fremont's Initial Brief, p. 17.

Baron argued that "limited construction hours in the Town of Fremont are unreasonably burdensome in view of existing technology associated with wind farm construction, including the construction capabilities, limitations and scheduling of work for wind turbine erection for the facility."[443] Baron argued that limiting the days of the construction would significantly interfere with the construction process and increase construction time, "imposing an undue burden on both [Baron] and on the surrounding communities."[444] Baron also argues that the delay caused by prohibiting construction on Saturday will risk the ability of the Project to complete construction by December 31, 2020, jeopardizing Baron's ability to qualify for the federal Production Tax Credit.

In support of its position, Baron asserted that Section 8.10(A)(14) raises logistical concerns with respect to the delivery of turbine components to the Facility. Baron stated that if adverse weather "prevents delivery on a Monday through Friday schedule in the Town of Fremont, the components would have to be rerouted for Saturday delivery within the other host towns, which may not always be feasible."[445] According to Baron, consistent "delivery availability (7 a.m. to 7 p.m. Monday through Saturday) alleviates logistical confusion during high-volume delivery periods and assists in keeping the overall construction schedule intact."[446]

Baron also argued that delivery of turbine components must be coordinated with the arrival of the crane used to erect the turbines. Baron maintained that, due to expense, only one

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[443] Baron's Initial Brief, p. 160.

[444] Hearing Exh. 9, Updated Application Exh. 31, p. 14.

[445] Baron's Initial Brief, pp. 160-161.

[446] Baron's Initial Brief, p. 161.

hub height capable crane typically is used per project and that, "once work is completed at a particular location, the crane is either disassembled and moved to the next location or crawled to the next turbine site assuming it is close by."[447] Baron asserted that, by preventing the movement of the crane on site in Fremont from 7 p.m. on Friday to 7 a.m. on Monday, Section 8.10(A)(14) would negatively impact the "construction schedule and cost[,] as the idle cost of a main crane is up to $20,000 per day."[448]

Baron asserted that the construction day restriction within the Town of Fremont "creates a potential delay in the project completion schedule."[449] Baron stated that, for example, the elimination of one "work day for approximately 52 weeks of construction would expand the time period for construction by approximately a month and a half."[450] Baron maintained that delays "in completing one stage of construction – such as delivery of turbine components, foundation materials or turbine erection – can delay not only the installation of that component, but the remainder of the Project, creating cascading delays."[451] Baron asserted that, because of such a cascading effect, the delay in work caused by Section 8.10(A)(14) could be considerably longer than a month and a half, "resulting in material increases to construction costs, additional risk that the Project will not meet the Production Tax Credit qualifications requirements, and an extension of construction-

447 Baron's Initial Brief, p. 161.

448 Baron's Initial Brief, p. 161.

449 Baron's Initial Brief, p. 161.

450 Baron's Initial Brief, pp. 161-162.

451 Baron's Initial Brief, p. 161.

related impacts (such as traffic and construction-related noise annoyance) within the host communities."[452]

The Examiners noted that Baron did not explain how construction delay may disqualify Baron from receiving a Production Tax Credit.[453] Nevertheless, the Examiners determined that Baron had sufficiently established that a uniform work schedule is needed for this multi-town Project and that the time of work restrictions contained in Local Law Section 8.10(A)(14) place an unreasonable burden on Baron's ability to complete construction on time and without unnecessary costs.[454] According to the Examiners, Baron stated that the Project could be constructed within 12-18 months[455] and that, based upon agreements it signed with NYSERDA for the sale of renewable energy credits, the Project must be operational by December 31, 2020.[456] The Examiners stated that they were not aware of any technology that would ensure that Baron could complete work on schedule if it were required to adhere to the work schedule limits contained in Local Law Section 8.10(A)(14).[457] The Examiners also noted that any traffic and noise impacts avoided on Saturdays if Section 8.10(A)(14) were followed, would still be imposed on the Town during the extra time it would take to complete construction. The Examiners stated that, if the financial viability of the Project is threatened by late completion, ratepayers could be deprived of a renewable energy project that would help the State achieve its emissions reduction goals.[458]

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[452] Baron's Initial Brief, p. 162.

[453] RD, p. 166, n. 549.

[454] RD, p. 166.

[455] Hearing Exh. 9, Updated Application Exh. 31, p. 14.

[456] Baron's Initial Brief, p. 4.

[457] RD, p. 167.

[458] RD, p. 167.

On exceptions, the Town of Fremont urges us to uphold Section 8.10(A)(14) of the Local Law. In addition, Intervenor Sokolow argues that certain concerns were not addressed by the Examiners, such as the increase in seasonal residents especially on weekends during certain months, the impact on tourism and visitors, the effects of construction lighting during night time, the responsibility for road repairs, the cumulative impact of multiple projects, and safe speeds for construction vehicles on dirt roads.

The additional concerns now raised by Intervenor Sokolow were not raised by her before and the record does not contain any information for us to consider the existence and extent of such impacts and whether the waiver could be tailored to provide further mitigation. Indeed, Intervenor Sokolow fails to offer any suggestions as to how the effects of the waiver can be mitigated further. Moreover, the responsibility for road repairs will be addressed in host community agreements or road use agreements, and concerns about safe speeds for construction vehicles will be addressed by applicable speed limits.

We agree with the Examiners that Baron has failed to establish how the potential construction delays will prevent it from qualifying for the Federal Production Tax Credit as long as Baron begins construction on the Facility before the end of 2019.[459] Moreover, although Baron stated in its opening brief that it had "signed a long-term agreement to sell renewable energy credits … to … NYSERDA and the Project must be operational by December 31, 2020," Baron did not argue that the

[459] RD, p. 166 n. 549. As stated on page 166 of the RD at footnote 548, federal law provides certain wind facilities with a renewable electricity production credit, which currently remains available, at reduced rates, for wind facilities that begin construction before the end of 2019. See 26 U.S.C. §45.

NYSERDA agreement would be rendered ineffective if construction delays prevented the Project from being operational by that date. In fact, Baron did not explicitly rely on its NYSERDA contract at all in arguing for the waiver. Accordingly, we disagree with the Examiners that concerns about the financial viability of the Project support Baron's request for the complete waiver of Section 8.10(A)(14). However, this is not determinative of the waiver request.

Baron grounds its waiver request in existing technology associated with wind farm construction. Baron does not argue that compliance with the Town of Fremont's prohibition against wind turbine construction on Saturdays is technically impossible but does argue that it is impractical and unreasonable.[460] In determining whether compliance with a local law requirement is impractical or unreasonable, neither Article 10, nor the Siting Board's regulations require demonstration that a project is not viable absent the requested waiver. In considering whether the burden imposed on a project is unreasonable, the Applicant must demonstrate that the burdens (e.g. construction delays, increased cost, impossibility, impingement on the public interest,[461] etc.) outweigh the benefits associated with applying the local law (managing traffic and construction noise impacts, etc.), as well as the impacts of refusing to apply it. Here, we find that Baron has met its burden of demonstrating that Section 8.10(A)(14) of the

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460 See 16 NYCRR 1001.31(e)(1).

461 See Chapter 106 of the Laws of 2019 (New York State Climate Leadership and Community Protection Act) §2(a) (finding that actions undertaken by New York will affect the severity of the climate crisis and the threat of additional and more severe impacts related to the crisis) and §4 (establishing aggressive but achievable targets lowering, then eliminating greenhouse gas emissions from anthropogenic sources statewide).

Local Law is unreasonably burdensome. The Town of Fremont responds claiming that the benefits of enforcing the limitation on construction are minimizing traffic and reducing construction noise and other nuisance impacts to the community on Saturdays. The burdens associated with enforcement of the law and the resulting construction delays are: increased project cost;[462] extension of the overall construction schedule; and delay in the benefits associated with production of renewable, non-emitting power to be produced by the Facility.

The prohibition against Saturday construction will not reduce traffic and noise impacts overall. It only changes the days of the week on which they will occur. In fact, because the construction restriction is likely to result in an extension of the overall construction schedule, associated noise and traffic impacts will also be extended. Moreover, the extended impacts will not be limited to the Town of Fremont but will also occur in the other host towns. We recognize that the Town of Fremont has a legitimate municipal interest in minimizing community impacts on Saturdays even if that leads to overall greater impacts from the Project. However, in this instance, exercise of that interest will also increase the impacts on surrounding communities and detract from the benefits of the Facility by delaying its operational date. Given that application of the law will result in limited benefits, shifting some impacts from Saturdays to other days of the week, and will likely increase

[462] The majority of the risk associated with the financing and recovery of the Facility cost is on private investors and will not be recovered through cost-of-service rates. The incremental cost of complying with a local law that is otherwise reasonable as applied to a proposed project, generally, will not directly impact costs to consumers and therefore, does not weigh heavily toward waiver, unless the record clearly demonstrates such incremental cost will result in an otherwise viable project not being built.

overall impacts both inside the Town of Fremont and the surrounding community, we find that, on balance, application of Section 8.10(A)(14) of the Local Law of the Town of Fremont is unreasonably burdensome and we will not apply it. Waiver of the law is also likely to result in earlier operation of the Facility, which we find to be in the public interest. We also note that Certificate Condition 51 requires Baron to coordinate with the Town of Fremont and other municipalities regarding traffic flow and capacity issues which will provide the Town and Baron an opportunity to minimize traffic impacts throughout the construction period, including Saturdays, thus mitigating any impacts resulting from not applying the Saturday construction prohibition.

2. Well Testing Requirement

Local Law Section 8.10(A)(20) requires the Applicant to offer well testing to all non-participating residences within 3,500 feet of each turbine. Under that section, if testing is requested, "the testing will take place six months before construction, during construction, 3 months after project completion, and every 3 years for the life of the project."[463] The types of tests to be conducted would be defined in a well testing agreement to be signed by the Applicant and the Town of Fremont.

Baron requested a waiver of Section 8.10(A)(20) upon the grounds that the requirements of that section of the Local Law are unduly burdensome, costly and unnecessary to minimize impacts to private wells.[464] DPS Staff supported Baron's requested waiver on the grounds that the provisions of Section 8.10(A)(20) were not necessary from an engineering perspective

[463] Hearing Exh. 9, Updated Application Appendix SSS.

[464] Hearing Exh. 9, Updated Application Exh. 31, p. 16.

and exceed minimum separation distances established by DOH to protect wells from contamination.[465] The Town of Fremont states that the 3,500 foot well testing requirement in Section 8.10(A)(20) should be upheld because it is appropriate to ensure documented safety of water supplies and to provide a clear record of water quality before and after construction of the Project.[466] Intervenor Sokolow and four residents of the Town of Fremont also opposed Baron's requested waiver.

Under Baron's proposal for well testing, a third-party would conduct pre- and post-construction well testing for potability for all non-participating residences within 1,000 feet of any turbines.[467] One test would be conducted before construction to establish a baseline, a second test would be conducted after construction of the Project is completed, and Baron would be responsible for the construction of a new well if the results of the post-construction test indicate that the construction of the Facility adversely impacted the potability of an existing and active well.

The Examiners determined that Baron's proposal would mitigate any potential adverse impacts to private wells from the Project to the maximum extent practicable and that the additional requirements imposed by Section 8.10(A)(20) were unnecessary from an engineering standpoint and unreasonably burdensome.[468] In doing so, the Examiners noted that Baron's proposal to conduct well testing for all non-participating residences within 1,000 feet of a turbine exceeds the setback requirements established by DOH and that the Town of Fremont's

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[465] See 10 NYCRR Part 5, Appendix 5-B, Table 1.

[466] Fremont's Initial Brief, p. 8.

[467] RD, pp. 170-171 and Appendix A, Proposed Certificate Condition 41.

[468] RD, p. 170.

engineering consultant acknowledged that the proposed well testing distance of "1,000 feet from turbine location is acceptable from an engineering standpoint."[469] The Examiners recommended that we grant Baron's request for a waiver and find that Section 8.10(A)(20), in requiring Baron to conduct well testing for non-participating residents' wells located within 3,500 feet from any turbine and to conduct such tests on multiple occasions throughout the life of the Facility, is unreasonably burdensome.[470]

In its Brief on Exceptions, the Town of Fremont again states that we should uphold Section 8.10(A)(20)'s well testing requirements. Moreover, noting that Baron conducted a well survey in February 2017 that included landowners within a 2,000-foot radius of the proposed Facility, Intervenor Sokolow argues that Baron should be required to conduct well testing at a distance of 2,000 feet from each turbine location or at a distance of up to 3,500 feet if there is a complaint. Intervenor Sokolow also requests that we give the Town of Fremont an option to provide an additional expert opinion, to be paid with intervenor funds, after Baron explains why it chose to survey landowners within a 2,000-foot radius of the proposed facility.[471]

Baron indicates that, as part of its original application, it conducted a well survey that identified 43 groundwater wells within 2,000 feet of the Facility.[472] Baron

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469 3/20/19 Tr. 565.

470 RD, p. 170.

471 We decline Intervenor Sokolow's request and note that Local Law Section 8.8(A)(9) requires Baron to provide the Town with a list of property owners, with their mailing addresses, within 2,000 feet of the boundaries of the proposed Wind Energy Overlay Zone.

472 Hearing Exh. 9, Updated Application Exh. 31, p. 16.

maintains that "the number of wells would be significantly greater if the distance was increased to 3500 feet."[473] Baron states that the burden imposed by Section 8.10(A)(20) is magnified by the multiple testing it requires post-construction because "there is no evidence to suggest that the Facility – once constructed – will have any impact on groundwater wells located close to the Facility, let alone at a distance of two-thirds of a mile."[474] Baron's engineering expert testified that, from a hydrogeologic perspective, there is no evidence to suggest that a separation distance of 3,500 feet between turbines and water supply wells is necessary to protect the well.[475] As stated, the Town of Fremont's expert engineer testified that "the 1,000 feet [proposed by Baron" is acceptable from an engineering standpoint … [t]here's no basis to dispute that … 1,000 feet … is necessary."[476]

Initially, we do not find the DOH setback requirements in Table 1 of Section 5-B.7 to 10 NYCRR Part 5 particularly helpful in this case. That table sets forth DOH required minimum separation distances between water wells and known sources of contamination, such as landfill waste, manure piles, cesspools, fertilizer, pesticides and other contaminants. In our view, that section does not appear particularly relevant to the issue of the effect on wells resulting from construction and operation of wind turbines. Section 8.10(A)(20) does not address known contaminants for which setback distances have been delineated, but rather establishes well testing requirements for the construction and operation of wind turbines.

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[473] Hearing Exh. 9, Updated Application Exh. 31, p. 16.

[474] Hearing Exh. 9, Updated Application Exh. 31, p. 17.

[475] 3/20/19 Tr. 101.

[476] 3/20/19 Tr. 565.

Our review of the record yields no rationale for selecting either 1,000 feet from a turbine, as Baron proposes, or 3,500 feet from a turbine, as the Local Law requires, in establishing the appropriate threshold distance for well testing. To be sure, engineers testified that a threshold for testing of 1,000 feet is acceptable; however, they provided no further explanation or support for their conclusion.

Section 8.10(A)(20) seeks, in part, to ensure that the Town's residents are confident that their water remains safe to use and is not negatively impacted by construction and operation of the Facility. That section was enacted as part of a Local Law that provides how the community is willing to host the Project, and we cannot waive that section absent a showing that compliance with it will be unreasonably burdensome. We do not believe that Baron has made the necessary showing. Section 8.10(A)(20) requires only that Baron offer well testing to non-participating residents within 3,500 feet of wind turbines. The record contains no information as to the number of wells involved. Nor does the record establish how much well testing costs or how much more costly compliance with Section 8.10(A)(20) might be as opposed to compliance with Baron's proposed well testing regime. Under these circumstances, we deny Baron's request for a waiver of Local Law Section 8.10(A)(20). We otherwise adopt Baron's well-testing proposal as set forth in Certificate Condition 41.

3. Submission of Traffic Routes to Town of Fremont

The Examiners recommended that we reject the Town of Fremont's request to require Baron to follow the procedural requirement in Section 8.8(A)(12)(b) of the Local Law, which provides that an application submitted to the Town to construct a wind farm project must include a "description of the routes to

be used by construction and delivery vehicles."[477] The Examiners stated that Baron had addressed the proposed routes in Application Exhibit 25 and Application Appendix HHH to Hearing Exhibit 1.[478] The Examiners also noted that Baron will be entering into a Road Use Agreement with the Town of Fremont and will be required in that agreement to identify the local roads it will be using.[479] In addition, the Examiners stated that Section 8.8(A)(12)(b) does not appear to request any information about the use of local routes that will not otherwise be submitted to the Town.[480]

No party has raised exceptions to the Examiners' recommendations regarding application of the procedural requirements in Section 8.8(A)(12)(b) of the Local Law. We agree with the Examiners' recommendation and therefore adopt it.

J. Decommissioning and Restoration - 16 NYCRR §1001.29

No dispute exists among the parties as to the events that would trigger Baron's obligation to decommission the Facility and restore the site or as to the scope of work that such decommissioning and site restoration would entail.[481] Although DPS Staff agrees that Baron's current estimated cost of $9,763,500 for decommissioning and site restoration is reasonable, the Examiners recommended that we not establish a dollar figure for decommissioning and site restoration at this

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477 RD, p. 171.

478 On page 15 of its initial brief, the Town of Fremont specifically states that it is "generally amendable to the haul routes specified in the Application" and "listed in Appendix HHH."

479 RD, p. 171; see Draft Road Use Agreement attached as Application Appendix III to Hearing Exh. 1.

480 RD, p. 171.

481 See RD, p. 172.

time, but that we require Baron to file updated decommissioning and site restoration costs pursuant to a Certificate Condition under which Baron would file updated decommissioning and site restoration costs prior to construction, after one year of Facility operation and every five years thereafter.[482] Prior to construction of the Facility, Baron would be required to establish letters of credit to be approved and held by each host Town until the Facility is fully decommissioned. Those letters of credit would be updated based upon updated decommissioning and site restoration cost estimates.

The Examiners rejected Baron's argument that it should be allowed to offset the estimated cost for decommissioning and site restoration with the value of projected amounts that could be received in salvaging the wind farm components.[483] Agreeing with the approach taken in the Cassadaga Wind Order and as urged by DPS Staff in this case, the Examiners recommended that, to reduce the financial risks inherent in the funding of decommissioning and site restoration plans, Baron be required to establish letters of credit in the full amount of the projected decommissioning and site restoration costs, without offset for salvage value.[484]

The Examiners noted that Baron's use of projected salvage value as an offset would remove more than 60% from the current total decommissioning cost estimate. In the Examiners' view, such a large amount of decommissioning costs should not be left to the vagaries of the salvage market. The Examiners stated that the host Towns should not be subject to the risk that funds sufficient for decommissioning will not exist when

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[482] RD, pp. 173, 176 and Appendix A, Proposed Certificate Condition 44.

[483] RD, p. 176.

[484] RD, pp. 173-176.

needed and should not be required to obtain salvage value for decommissioning if Baron were to abandon the Project. In doing so, the Examiners recognized the Town of Fremont's position that it is not in the business of decommissioning or salvaging wind energy facilities and that it would create an undue burden and risk to the Town if decommissioning cost estimates were offset by salvage estimates, especially if such estimates prove to be overly optimistic.[485]

As an initial matter, the Town of Fremont excepts from the RD to the extent that it does not recommend that we establish a minimum amount below which the letters of credit for estimated decommissioning costs must not fall.[486] As the Town of Fremont states, the Cassadaga Wind Order recognized the importance that the Certificate establish a baseline value for the decommissioning reserve.[487] The Cassadaga Wind Order therefore established an $8 million figure based on the estimate prepared on behalf of the host towns and put into the record by the applicant in that case. Although Intervenor Sokolow states that the "starting point for calculating a [minimal reserve] number should not be below Cassadaga's Order per MW plus inflation," the record here contains specific dollar amount estimates for itemized activities associated with decommissioning and site restoration that support adoption of the figure provided by Baron, namely $9,763,500.[488] Accordingly, we adopt that figure as the baseline value for the decommissioning reserve. If Baron's later estimates demonstrate that a higher reserve should be established, those estimates

485 RD, p. 176 n. 570; Fremont's Reply Brief, pp. 5-6.

486 Fremont's Brief on Exceptions, p. 7.

487 Cassadaga Order, pp. 98-99.

488 See RD, p. 172.

shall prevail; however, the level of the reserve should, in no event, fall below the $9,763,500 amount established here.

In addition, to ensure that the letters of credit provide their intended benefits – an assured source for decommissioning and site restoration – we require that the letters of credit be irrevocable and state on their face that they are expressly held both by and for the sole benefit of the host Towns.

Baron asserts that the Examiners failed to explain why the regulations would request information about "salvage and recycling" if that information is irrelevant to the final determinations required to be made by the Siting Board regarding decommissioning and site restoration.[489] Baron argues that the only logical reason for the regulations to ask for information about salvage and recycling is to allow the Siting Board to evaluate whether the decommissioned facility has value that should be considered in determining how much financial assurance is required. According to Baron, by refusing to allow an offset for salvage value, the Examiners have effectively rendered 16 NYCRR §1001.29(a)(4) a nullity.

Baron additionally argues that it has adopted an extremely conservative approach to calculating the value of scrap metal offsets that will ensure sufficient funds exist to cover the costs of decommissioning and site restoration. Baron asserts that the Examiners have not explained why New York should not follow other states and a federal agency that have allowed scrap value to offset decommissioning and site restoration costs. Baron maintains that, "given the millions of dollars of steel and copper in the parts, salvage is an inevitable part of any facility decommissioning," and that the

[489] Baron's Brief on Exceptions, p. 47.

Town of Fremont would not be burdened by considering the salvage of equipment because it likely will retain a third party to manage the decommissioning process should decommissioning be required. In response, the Town of Fremont notes that there is "little predictability in the salvage value of scrap metals and other materials that comprise the Project facilities" and that it is not experienced in scrap valuation and may incur additional costs if it is ultimately required to engage a third party to manage the decommissioning process.[490]

We agree with the Examiners' conclusion that Baron should not be allowed to offset the estimated cost for decommissioning and site restoration with the value of projected amounts that could be received in salvaging the wind farm components. The evidence in this record does not give us sufficient assurance that allowing Baron to use salvage value as an offset will ensure that sufficient funds will exist to cover the decommissioning costs, which could be incurred as long as 25-40 years in the future, at the end of the Project's projected lifespan. Allowing for salvage credits does not provide adequate assurance if problems later arise regarding the Applicant's ability to maximize salvage and resale value, in which case the local communities would be left with abandoned infrastructure. In our view, any risk involved in recovering salvage value should be borne by the Applicant, not by the host municipalities. If there is any overage remaining from the security or from salvage and resale value that ultimately may be realized, such amounts will be returned to the Certificate Holder after decommissioning and restoration is finished.

The fact that 16 NYCRR §1001.29(a)(4) requests information about "salvage and recycling" does not require that

[490] Fremont's Brief Opposing Exceptions, p. 7.

we allow an offset for salvage value.[491] Contrary to Baron's assertion, our decision does not render section 1001.29(a)(4) a nullity, as our determination here does not prevent the consideration of offsets for salvage value as to other projects under other circumstances. Moreover, how other states or federal agencies may treat salvage value is not controlling or persuasive as to our determination. Notably, while Baron has submitted decommissioning plans that include offsets for salvage value as to projects located outside of New York, Baron has failed to show how those plans compare to its proposed decommissioning plan or what reasoning supported the adoption of such plans in those other jurisdictions.

K. Public Interest Review - PSL §168(3)(b)

The Examiners recommended that we find that construction and operation of the Project will serve the public interest.[492] We agree with their recommendation. As stated elsewhere in this Order, the Project is a beneficial addition to the electric generation capacity of the State, is consistent with the State Energy Plan and other State energy policy goals and initiatives,[493] and will not have an adverse impact on Environmental Justice Communities.[494] Moreover, the record shows that the Project will have some economic benefits in the form of direct short term construction jobs, direct long-term operation and maintenance jobs, and PILOT payments.[495] In the Examiners'

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491 See Cassadaga Order, pp. 94, 97-98.

492 RD, pp 183-184; PSL §168(3)(b).

493 Hearing Exh. 1, Application Exh. 10; 3/20/19 Tr. 162, 294, 300-302, 732.

494 Hearing Exh. 1, Application Exh. 28.

495 Hearing Exh. 9, Updated Application Exh. 27, pp. 7, 15; 3/20/19 Tr. 173w-173x; 293-294; 302-303.

view, the determination that the Project is in the public interest can be made without resolving a dispute between Baron and DPS Staff as to the reliability or reasonableness of Baron's estimates regarding jobs resulting indirectly from or induced by the Facility (indirect/induced jobs).[496]

No party takes exception to the Examiners' recommendations. We agree with the Examiner's recommendations and, with our adoption of the Certificate Conditions attached as appendix A to this Order, which ensure that any adverse environmental and other relevant impacts from the Project are avoided or minimized to the maximum extent practicable, we find that the construction and operation of the Facility would serve the public interest.

We note that Baron has agreed to a Certificate Condition, proposed by DPS Staff, that would require Baron to file with the Secretary within one year after the Project becomes operational, a tracking of the actual number of direct jobs created during the construction and operational phases of the Project, as well as the actual tax payments made to local jurisdictions. The Examiners agreed with DPS Staff that this "after-the-fact tracking will allow Staff, the relevant Stakeholders, and the Siting Board to assess the accuracy of the estimated direct job impacts, and actual payments to local jurisdictions, and will enable Staff and [the] Siting Board to ascertain the reasonableness of job impact estimates for other future major electric generation projects within the State."[497]

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[496] RD, p. 183. "[I]ndirect and induced impacts are the impacts of changes in jobs resulting from spending on the Project and from changes in income resulting from the Project; thus, indirect and induced jobs are jobs that are created or lost by businesses and households having more or less income." 3/20/19 Tr. 173k.

[497] RD, pp. 183-184; DPS Staff's Initial Brief, p. 76.

We agree as well and therefore adopt that Certificate Condition as Certificate Condition 35.

To the extent that public comments made after issuance of the RD question whether the record supports the conclusion that the Project will result in reduced CO_2 emissions, we determine that the record supports such a conclusion.[498] DPS Staff forecasted that the Project will result in annual statewide CO_2 reductions of 149,015 tons,[499] and the Applicant's modeling forecasted that the Project will result in annual statewide CO_2 reductions of 174,254 tons.[500] Moreover, as the Examiners noted on page 177 of the RD, the Applicant otherwise has provided record support for its proposition that the Project will help address state and regional air pollution and greenhouse gas emissions reduction goals.

L. Miscellaneous

1. Design Dispute

The Examiners discussed two options for the underground installation of certain electric collection systems: (1) between turbines T81 and T46 and (2) from turbine T78 to the proposed collection substation.[501] The Examiners recommended that we certify the second option because Baron and DPS Staff agreed that the second option was preferable to the first option. No party has raised exceptions to that recommendation; we therefore adopt the Examiners' recommendation that Baron be permitted to proceed with the second option.[502]

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498 3/21/17 Tr. 302.

499 3/21/19 Tr. 162.

500 3/21/19 Tr. 162; Application Exh. 8, Table 8-1.

501 RD, p. 185.

502 RD, p. 185.

2. Good Neighbor Agreements

The Examiners recommended that we reject Intervenor Sokolow's argument that the good neighbor agreements Baron has entered into or will enter into with certain property owners are contrary to public policy because they violate health and safety standards established by the host towns' local laws.[503] A grantor under a good neighbor agreement waives local land use regulations with respect to setback restrictions and noise limitations.[504] However, as the Examiners determined, good neighbor agreements are not against public policy because the applicable local laws placing setback and noise restrictions on wind farms explicitly allow affected property owners to waive or request a waiver of those restrictions.[505]

We agree with the Examiners that Intervenor Sokolow's reliance on Real Property Law §235-b to support her argument is misplaced.[506] That statute creates a warranty of habitability in residential leases and provides that "[a]ny agreement by a lessee or tenant of a dwelling waiving or modifying [the warranty of habitability] shall be void as contrary to public policy." As the Examiners recognized, Real Property Law §235-b does not apply to contractual agreements between private landowners and wind farm developers.[507]

On exceptions, Intervenor Sokolow broadly states, without citation to any supporting authority, that project

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503 RD, pp. 185-186.

504 Hearing Exh. 192, AS-41, p. 2.

505 Town of Fremont Local Law No. 2 of 2018, §8.14; Town of Dansville Local Law No. 2 of 2017, §16; Town of Cohocton Local Law No. 1 of 2006, §II(B)(1); Town of Cohocton Local Law No. 2 of 2006, §1130(2)(a)(i) and (2)(d)(vi); Town of Wayland Local Law No. 4 of 2017, Article VII(1) and (4).

506 RD, p. 186.

507 RD, p. 186.

participants cannot waive generally applicable land use and public health and safety restrictions. However, as stated, the local laws at issue specifically allow for such a waiver. To the extent Intervenor Sokolow disagrees with the municipalities' decision to allow for a waiver, her concerns would have more appropriately been directed to the specific municipality in which she owns property when that municipality was deciding to pass or amend its applicable local laws. Moreover, as addressed elsewhere in this order, with the appropriate Certificate Conditions in place, any potential adverse impacts to public health and safety have been avoided or minimized to the maximum extent practicable.

3. Additional Certificate Conditions

a. Public Notice about Commencement of Construction

The Examiners recommended that we adopt Certificate Conditions 18 and 19 as proposed by DPS Staff and that we reject Baron's proposed changes to those Certificate Conditions.[508] Certificate Condition 18 provides that "[a]ctivities 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." Proposed Certificate Condition 19 states, in relevant part, that the "Certificate Holder and its contractors shall not commence site preparation, cutting and clearing of trees, or other construction activities until a 'Notice to Proceed with Construction' has been issued by the Secretary or by the Chief

[508] RD, pp. 187-189.

of the Environmental Certification and Compliance Section of the DPS Office of Electric, Gas & Water."[509]

Baron proposed to delete the word "minor" from Certificate Condition 18 and to add to Certificate Condition 19 language that specifies activities that are not to be considered "construction" and therefore are permissible before a Notice to Proceed with Construction is issued,[510] as well as language providing that the Notice to Proceed with Construction "will be issued no later than 60 days after all pre-construction compliance and informational filings have been filed by the Certificate Holder and may not be unreasonably withheld."[511] The Examiners recommended that Baron's proposed changes not be adopted.[512]

Baron now argues that it is unnecessary for Certificate Condition 19 to state that the Certificate Holder is prohibited from commencing site preparation or other construction activities until a Notice to Proceed with Construction is issued.[513] Baron asserts that it will be required to undergo an extensive and time consuming process to obtain approval of the compliance filings needed to commence construction and that it therefore should be allowed to engage in site preparation activities once the last compliance filing for construction has been approved. DPS Staff counters that issuance of a Notice to Proceed with Construction is a standard requirement for all siting projects, serves to inform the municipalities and public that all pre-construction obligations

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509 RD, Appendix A, Proposed Certificate Condition 19.

510 Hearing Exh. 32, CRR-3, p. 7.

511 Hearing Exh. 32, CRR-3, p. 7.

512 RD, p. 189.

513 Appendix C to Applicant's Brief on Exceptions, p. 1.

have been satisfied and provides the Certificate Holder with formal assurance that site clearing and construction activities may commence.[514] DPS Staff also states that it knows of "no project where such notice was withheld after pre-construction information reports were filed and compliance filings approved."[515]

We agree with DPS Staff that the Notice to Proceed with Construction minimizes the risk of confusion amongst parties and the public regarding when the Certificate Holder may begin site clearing and construction activities. We also agree with the Examiners' recommendation that we not adopt the changes Baron originally proposed to Certificate Condition 19. We therefore adopt Certificate Condition 19 as proposed by the Examiners.

b. Construction Permits

The Examiners recommended that we adopt proposed Certificate Condition 10 with language providing that, "[p]rior to the commencement of construction, the Certificate Holder shall file with the Secretary, New York State Department of Transportation Highway Use and Occupancy permits, County and/or Town Road Use and Occupancy Permits, and any other required permits identified in Exhibits 31, 32 and 33 to the Application."[516] Although Baron argued that the permits identified in proposed Certificate Condition 10 are "already captured in other compliance filings," the Examiners stated that Baron did not establish where in the proposed Certificate Conditions those permits are required to be filed as part of other compliance filings. The Examiners concluded that the

[514] DPS Staff's Redacted Brief Opposing Exceptions, p. 2.

[515] DPS Staff's Redacted Brief Opposing Exceptions, p. 2.

[516] RD, pp. 189-191.

language identifying the permits would clarify the types of permits that Baron must file prior to construction.[517]

Stating that transportation permits typically are issued in phases and that all permits will not necessarily be issued before commencement of construction, Baron requests that proposed Certificate Condition 10 be revised to include language that the Certificate Holder shall file required permits prior to commencement of "applicable phases of construction."[518] No party objects to Baron's proposed revision, which we incorporate into Certificate Condition 10.

c. Substantive State Requirements

The Examiners recommended that we adopt proposed Certificate Condition 17, which states that the "Certificate Holder shall construct and operate the Facility in a manner that conforms to all substantive State requirements, including, but not limited to, those identified in Exhibit 32 of the Application."[519] The Examiners rejected Baron's proposal that the Certificate Condition be modified to delete the phrase "included but not limited to" and require instead that Baron conform to all substantive State requirements "as identified" in Exhibit 32 of the application.[520]

The Examiners found unpersuasive Baron's argument that the language in proposed Certificate Condition 17 was too broad and that, "after Certification and agreement that all laws were addressed" in Application Exhibit 32, it would be extremely prejudicial to Baron if additional substantive State requirements could be "brought to light" and then applied to the

[517] RD, pp. 190-191.

[518] Appendix C to Applicant's Brief on Exceptions, p. 1.

[519] RD, p. 192 and Appendix A, Proposed Certificate Condition 17.

[520] Hearing Exh. 32, CRR-3, p. 7.

Facility.[521] The Examiners reasoned that, under PSL §168(3)(e), Baron is required to comply with all applicable substantive State laws and regulations, not just those Baron has identified in its application.[522]

On exceptions, Baron reiterates the arguments that the Examiners rejected.[523] For the reasons stated by the Examiners, we also reject Baron's arguments.

d. Compliance Inspections and Review Meetings

The Examiners recommended that we adopt DPS Staff's proposed Certificate Condition 86, requiring Baron to "organize and conduct monthly site-compliance inspections for DPS Staff as needed during construction and restoration of the Facility site."[524] In doing so, the Examiners rejected Baron's arguments that the proposed Certificate Condition 86 was unnecessary in light of DPS's general authority to conduct compliance inspections[525] and was duplicative of another Certificate Condition requiring Baron to fund an independent, third-party environmental monitor to oversee compliance with environmental commitments and permit requirements, perform daily inspections of construction work sites, and, in consultation with DPS, issue regular reporting and compliance audits.[526]

In the Examiners' view, proposed Certificate Condition 86 does not merely restate DPS's general authority to inspect Project sites but provides specifically for monthly site

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521 Appendix B to the Applicant's Reply Brief, p. 1.

522 RD, p. 192.

523 Appendix C to Applicant's Brief on Exceptions, p. 1.

524 RD, p. 195; Hearing Exh. 123, SPP-2, Proposed Certificate Condition 86, p. 37.

525 Appendix B to Applicant's Reply Brief, p. 6.

526 3/20/19 Tr. 736.

inspections on an as-needed basis to address various subjects.[527] The Examiners concluded that the requirement of as-needed monthly site inspections was not duplicative of the requirement for funding of an independent, third-party environmental monitor. The Examiners deferred to DPS Staff's opinion that such compliance inspections and review meetings will serve many useful functions during the construction and restoration of the Project site.[528]

In its Brief on Exceptions, Baron reiterates its arguments that proposed Certificate Condition 86 is duplicative of Certificate Condition 78 and unnecessary in light of DPS's general regulatory authority to conduct project inspections. If we determine that Certificate Condition 86 is appropriate, Baron requests in the alternative that the requirement for "monthly" inspections be revised to allow inspections on an "as needed" basis. As stated by the Examiners, Certificate Condition 78 is not duplicate of Certificate Condition 86 and does not merely restate DPS's general regulatory authority to conduct project inspections. Moreover, Baron's alternative revision is unnecessary because proposed Certificate Condition 86 already provides that monthly inspections will occur only "as needed."

CONCLUSION

Based on the record before us, the arguments of the parties, and all applicable laws and policies, we grant the Certificate of Environmental Compatibility and Public Need to Baron Winds LLC subject to the conditions set forth in Appendix A to this order and the SEEP Specifications set forth in Appendix B to this order.

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[527] RD, pp. 195-196.

[528] RD, p. 196.

The Board on Electric Generation Siting and the Environment orders:

1. The recommended decision of Examiners Anthony Belsito, James A. Costello and Maria E. Villa, 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 denied.

3. Subject to the conditions set forth in this opinion and 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 Baron Wind, LLC (the Applicant) for the construction and operation of a 242 megawatt wind farm consisting of up to 68 wind turbines in the Towns of Cohocton, Dansville, Fremont and Wayland, in Steuben County, New York, and a point of interconnection with the electric grid through the existing 230 kilovolt (kV) Canandaigua Switching Station owned and operated by the New York State Electric and Gas Company (NYSEG), provided that the Applicant files, within 30 days after the date of issuance of this opinion and order, a written acceptance of the certificate pursuant to 16 NYCRR §1000.15(a).

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), the Certificate Conditions attached as Appendix A and the SEEP Specifications attached as Appendix B. Pursuant to 16 NYCRR §1002.2(d), parties served with the compliance filings may file comments on the filing within 21 days of 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 any portion of the Project, it shall so notify the Secretary in writing within 30 days of 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 one day prior to the affected deadline.

8. This proceeding is continued.

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

(SIGNED) KATHLEEN H. BURGESS
Secretary

APPENDIX A

CERTIFICATE CONDITIONS

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Certificate Conditions

I. Project Authorization

1. Baron Winds LLC (Baron or the Certificate Holder) is authorized to construct and operate the Facility (Facility or the Project), as described in the Application by Baron 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 (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 Certificate Holder is responsible for obtaining all necessary permits and any other approvals (including those pursuant to PSL §§68, 69 and 70) that may be required for the Project and which the Siting Board is not empowered to provide or has expressly authorized. In addition, the Siting Board expressly authorizes 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 and 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.

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 68 wind turbines in the Towns of Cohocton, Dansville, Fremont and Wayland, temporary and permanent access roads, 34.5 kilovolt (kV) underground collection system, collection and interconnection substation, three permanent meteorological towers, one operations and maintenance (O&M) building (if necessary), temporary concrete batch plant (if necessary) and two temporary staging/laydown areas. The total generating capacity of the Facility shall not exceed 242 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. The Certificate Holder has not asserted that it has the power of eminent domain to acquire real property or demonstrated that the feasibility of the Project relies 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 for the Facility or for any of the access roads, construction staging areas or interconnections necessary to service the Facility. By granting this Certificate to Baron, 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 service the Facility without an express amendment to this Certificate, granted by the Siting Board, authorizing such proceedings.

8. 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.

9. The Secretary, or the 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

10. Upon receipt of any and all permits for the Project, 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. Prior to the commencement of applicable phases of construction, the Certificate Holder shall file with the Secretary, New York State Department of Transportation Highway Use and Occupancy permits, County and/or Town Road Use and Occupancy Permits, and any other required permits identified in Exhibits 31, 32 and 33 to the Application.

11. The Certificate Holder shall implement the impacts avoidance, minimization and mitigation measures, as described in the Application and clarified by Baron's supplemental filings, updates and replies to discovery data requests and additional exhibits, and this Certificate.

12. 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 Certificate.

13. The Certificate Holder shall incorporate and implement as appropriate, in all compliance filings and construction

activities, American National Standards Institute (ANSI) standards and measures for engineering design, construction, inspection, maintenance and operation of its authorized Facility, including features for Facility security and public safety, utility system protection, plans for quality assurance and control measures for facility design and construction, utility notification and coordination plans for work in close proximity to other utility transmission and distribution facilities, vegetation and facility maintenance standards and practices, emergency response plans for construction and operational phases, and complaint resolution measures.

14. The Certificate Holder shall work with New York State Electric and Gas Corporation (NYSEG), 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 NYSEG), the system will have power system relay protection and appropriate communication capabilities to ensure that operation of the NYSEG 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 NYSEG, and any successor Transmission Owner (as defined in the NYISO Agreement). The Certificate Holder shall demonstrate compliance with applicable NPCC criteria and shall be responsible for the costs to verify that the relay protection system is in compliance with applicable NPCC, NYISO, NYSRC and NYSEG criteria.

15. The authority granted in the Certificate and any subsequent Order(s) in this proceeding is subject to the following conditions necessary to ensure adherence 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 any 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.

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, the Certificate Holder may seek reconsideration from the confirming Chair of the Siting Board, Commissioner, the 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 sparingly and with due regard to 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.

e) If DPS Staff determines that a significant threat exists such that protection of the public or the environment at a particular location requires the immediate implementation of specific measures, 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 Certificate Holder or the relevant contractors to implement the corrective measures identified in the approved Certificate or Compliance Filings. However, all directives must follow the protocol established for communication between parties as required by the final approved *Project Communications Plan*. The field crews shall immediately comply with DPS Staff's directive as provided through the communication protocol. DPS Staff will immediately thereafter inform the Certificate Holder's Construction Inspector(s) and/or environmental monitor(s) of the action taken.

16. 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.

17. The Certificate Holder shall construct and operate the Facility in a manner that conforms to all substantive State requirements, including, but not limited to, those identified in Exhibit 32 of the Application.

18. 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.

III. Notifications

19. The Certificate Holder and its contractors shall not commence site preparation, cutting and clearing of trees, or other construction activities until a "Notice to Proceed with Construction" has been issued by the Secretary or by the Chief of the Environmental Certification and Compliance Section of the DPS Office of Electric, Gas & Water. At least 14 days prior to the Certificate Holder's commencement of site preparation, clearing and construction, the Certificate Holder shall notify the public 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 for dissemination and at least one free publication if available (e.g., Pennysaver);

    d) Provide notice for display in public places, which shall 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.

20. The Certificate Holder shall write the notice(s) required in Condition 19 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.

21. Upon distribution of Notice, and prior to commencement of site preparation, clearing and construction, the Certificate Holder shall notify the Town Boards of each affected municipality of each location where the Notice required in Condition 19 has been posted.

22. At least seven (7) business days prior to commencement of site preparation, clearing and 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.

23. Prior to the end of construction, the Certificate Holder shall notify the entities identified in Condition 19(a), 19(b), and 19(e) with the contact name, telephone number, email and mailing address of the Facility Operations Manager.

24. 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.

25. 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 Requirements

A. Information Reports

The following written information reports and other documents shall be filed with the Secretary in accordance with 16 NYCRR §1002.4. The following information reports and other documentation shall be filed with the Secretary

prior to the commencement of construction date, unless otherwise noted:

1. General

26. Documentation, including proofs of consent, redacted as needed to protect confidential information, demonstrating that all necessary agreements are in place for use of the Facility Site for construction and operation (e.g., landowner agreements, easements, setback waivers, or Good Neighbor Agreements).

27. Interconnection:

    a) The Interconnection Agreement between the NYISO, NYSEG and the Certificate Holder. Any updates or revisions to the Interconnection Agreement shall be filed 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 NYSEG and file such information with the Secretary. If any such change is made in the event of an emergency, the Certificate Holder shall notify the Secretary as soon as practicable, but in no event later than one week after the date of installation.

28. Facilities Studies:

    a) All Facilities Studies issued by NYSEG and the NYISO shall be filed within 14 days of receipt of the final study report(s).

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

29. Any System Reliability Impact Study (SRIS) 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.

30. The following shall be filed regarding wind turbine model certification(s) for all proposed model(s), if not already provided to the Siting Board:

a) Third-party type certification in accordance with International Electrotechnical Commission (IEC) 61400, proving that wind turbine model(s) meet international design standards; and

b) Third-party Project certification showing that turbine model(s) are compatible with existing Project conditions (i.e., site specific conditions).

31. The Certificate Holder shall file with the Secretary within 60 days of the commercial operation date a certification that the collector lines were constructed to the latest editions of ANSI standards. The Facility's electrical collection system shall be designed in accordance with applicable standards, codes, and guidelines as specified in Exhibit 5 of the Application.

32. In the event that the final Facility design requires a Special Protection System, the Certificate Holder shall file a report with the Secretary regarding implementation of such system, which is designed to avoid possible overloads from certain transmission outages, as well as copies of all studies that support the design of such a system. In addition, the Certificate Holder shall provide all documentation for the design of special protection system relays, with a complete description of all components and logic diagrams. Prior to commencement of operations, the Certificate Holder shall demonstrate through appropriate plans and procedural requirements that the relevant components of the Special Protection System will provide effective protection.

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

34. A Relay Coordination Study that has been reviewed and accepted by NYSEG shall be filed at least four months prior to the projected date for commencement of commercial operation of the Facility.

35. The Certificate Holder shall file with the Secretary, within one year after the Project becomes operational, a tracking report of the actual number of direct jobs created during the construction and operational phases of the Project, as well as

the actual tax payments to local jurisdictions made during the Project.

2. Permits and Approvals

36. Any and all federal permits and/or approvals required to conduct jurisdictional activities associated with certain aspects of construction and operation of the Facility shall be filed with the Secretary upon receipt of such permits and/or approvals. If relevant Project plans require modifications due to conditions of federal 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, as appropriate, to incorporate design requirements for changes in environmental impacts.

37. The following shall be filed regarding Federal Aviation Administration (FAA) permits and required approval documentation:

a) Prior to construction, Final Determinations or Determinations with conditions resulting from aeronautical studies;

b) If any Determinations of No Hazard to Air Navigation for the Project's wind turbines are extended, revised, or terminated by the issuing office, documentation or verification detailing the actions shall be filed with the Secretary within 10 days of issuance;

c) All material related to the FAA approval of lighting systems to be installed on wind turbines (and any associated equipment), including Aircraft Detection Lighting Systems and non-Aircraft Detection Lighting Systems, shall be filed with the Secretary prior to construction;

d) If relevant Project plans require modifications due to results of FAA studies and Determinations, the Certificate Holder shall provide any updated Compliance Filings, such as modified site plans and other drawings or details, in accordance with the requirements set forth in the Requirements for the Development of Site Engineering and Environmental Plan Compliance Filings (SEEP Specifications), which is attached as Appendix B; and

e) A copy (or verification of filing to the FAA) of the FAA Form 7460-2, Notice of Actual Construction or Alteration shall be filed with the Secretary upon completion of construction of the Project.

38. Upon receipt of any local or state permits and/or approvals required for construction and operation of the Facility shall be filed with the Secretary, if such approvals were authorized by the Siting Board. If relevant Project plans require modifications due to conditions of local or state 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, as appropriate, to incorporate design requirements for changes in environmental impacts if necessary as a result of the approval.

a) The Board hereby authorizes the New York State Department of Transportation (NYS DOT) 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 Facility.

3. Plans, Profiles, and Detail Drawings

39. Prior to commencement of commercial operation of the Facility, the Certificate Holder shall file an attestation affirming that the final Facility design incorporates 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; and

d) Lighting controls at substations, turbines and turbine sites shall be maintained.

40. *As-Built Plans* in both hard and electronic form shall be filed within six months of the commencement of commercial operation of the Facility and shall include the following:

a) GIS shapefiles showing all components of the Project (wind turbine locations, electrical collection system, substation, buildings, access roads, met towers, point of interconnection (POI), etc.);

b) Collection circuit layout map; and

c) Details for all Project component crossings of, and co-located installations of Project components with existing pipelines showing: cover, separation distances, any protection measures installed, and locations of such crossings and co-located installations.

4. Environmental

41. Water Supply Protection:

a) The Certificate Holder shall file with the Secretary an attestation confirming that no wind turbine will 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.

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.

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.

42. A final Bird and Bat Conservation Strategy (BBCS) will be developed in consultation with the New York State Department of Environmental Conservation (DEC), DPS Staff and the United States Fish and Wildlife Service (USFWS). Said consultations are open to any party desiring to participate or observe. A copy of the Final BBCS, will be provided to DEC and DPS Staff.

B. Compliance Filings

The following plans, drawings, and other documents shall be filed for approval by the Siting Board in accordance with the rules for submittal, public comment, and decisions set forth in 16 NYCRR §1002.2 and §1002.3. The Certificate Holder shall implement all requirements of the compliance filings, as approved or amended by the Siting Board. Required compliance filings shall be filed with the Secretary prior to the commencement of construction date, unless otherwise noted.

1. General

43. Prior to commencement of construction, the Certificate Holder shall submit a *Project Communications Plan* identifying the Certificate Holder's construction organizational structure, contact list, and protocol for communication between parties. The plan shall include the names and contact information of all individuals responsible for Project oversight.

44. Prior to commencement of construction, a *Final Decommissioning Plan* shall be submitted. Irrevocable letters of credit will be established by the Certificate Holder and state on their face that they are to be held by and for the sole benefit of each town hosting Facility components and that no security interest(s) in the letters of credit have been or will be created in favor of a third party. The total amount of the letters of credit created for the Towns of Cohocton, Dansville, Fremont, and Wayland will represent the total final decommissioning and site restoration estimate, as described below, but will in no event be less than $9,763,500. 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 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 Cohocton, Dansville, Fremont, and Wayland 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; and

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.

45. The Certificate Holder shall submit a final *Complaint Resolution Plan* for both construction and operation phases of the Project, which shall be developed in consultation with the Towns. The plan shall also contain a separate procedure to address operational noise complaints. A copy of the *Final Complaint Resolution Plan* shall be submitted to the Towns and filed at the Facility document repositories. The plan shall address complaint reporting and resolution procedures for all construction and operation issues. The plan shall include protocols for:

a) registering a complaint;

b) notifying the public of the complaint procedures;

c) responding to and resolving complaints in a consistent and respectful manner;

d) logging and tracking of all complaints received and resolutions achieved;

e) reporting to DPS Staff any complaints not resolved within 30 days of receipt;

f) arbitrating complaints not resolved within 60 days; and

g) providing annual reports of complaint resolution tracking to DPS Staff that shall also be filed with the Secretary.

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.

46. The Certificate Holder shall use an Aircraft Detection Lighting System or similar technology on wind turbines to minimize light pollution nuisance. Details of the technology shall be submitted in compliance with Certificate Condition 37(c).

47. Prior to construction, the Certificate Holder shall file manufacturer provided information (including technical and safety manuals) regarding the design, safety and testing information for the wind turbine(s), specific generating and related facilities equipment to be installed during construction, or as related to any equipment installed during Facility operation as a replacement of failed or outdated equipment. All such updates shall be submitted to the Siting Board, or to the Commission after the Siting Board’s jurisdiction has ceased, by filing with the Secretary throughout the life of the plant. 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. Prior to the commercial operation date, the Certificate Holder shall file with the Secretary, *Operation and Maintenance Plan*(s) for the Facility. The plan(s) shall demonstrate conformance with manufacturer's required maintenance schedules.

2. Health and Safety

49. The Certificate Holder shall file complete documentation of its emergency procedures and list of emergency contacts. The Certificate Holder shall file annually with the Secretary an updated copy of its emergency procedures and list of emergency contacts and with documentation of any modifications. The Certificate Holder may file separate emergency procedures for construction and operation. Emergency procedures for construction must be filed prior to the commencement of construction and emergency procedures for operation must be filed prior to the commencement of commercial operation.

50. Prior to the commencement of construction of the O&M building, collection substation, a detailed *Facility Exterior Lighting Plan* or *Plans* shall be submitted for review and approval by the Siting Board; the Plan shall address:

a) security lighting needs at wind turbine sites, substation, the Facility Operations and Maintenance building site and any exterior equipment storage yards;

b) plan and profile figures to demonstrate the lighting area needs and proposed lighting arrangement at the collection substation site, the Facility Operations and Maintenance building site, any exterior equipment storage yards; and plan, elevation, and details for lighting;

c) lighting should be designed to provide safe working conditions at appropriate locations;

d) exterior lighting design shall be specified to avoid off-site lighting effects, by:

(i) use of task lighting as appropriate to perform specific tasks; task lighting shall be designed

to be capable of manual or auto-shut off switch activation rather than motion detection; and

(ii) for lighting other than turbine door safety lighting, full cutoff fixtures, with no drop-down optical elements (that can spread illumination and create glare), shall be required for permanent exterior lighting;

e) manufacturer's cut sheets of all proposed lighting fixtures; and

f) lighting of all required wind turbine components shall be implemented as per the current requirements of the Federal Aviation Administration (FAA) Advisory Circular 70/7460-IL, Chapters 13 and 14 or as updated, as of the time of Compliance Filing submittal. Documentation shall be provided regarding FAA approval of site-specific lighting (as specified in Condition 37 and 46).

3. Transportation

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. The Certificate Holder shall file the following regarding potential transportation impacts in accordance with applicable requirements in Section B 9(h) of the SEEP Specifications attached as Appendix B:

a) Copies of all necessary transportation permits from the affected State, County, and Town agencies. Such permits shall include but not be limited to: Highway Work Permits to work within the Right-of-Way (ROW), permits to exceed posted weight limits, Highway Utility Permits to work within the ROW, Traffic Signal Permits to work within the ROW, Special Haul Permits for oversize/overweight vehicles, and Divisible Load overweight Permits;

b) Final and updated *Route Evaluation Study,* including maps of final transportation routes for Project component deliveries;

c) *Traffic Control Plans* for any city, town, or village that may experience delays to local traffic during construction activities. The *Traffic Control Plans*

shall include copies of any *Host Community Agreements* and/or *Road Use Agreements* with the County and any affected towns where the local roads will be utilized for delivery or construction vehicle transportation; and

d) Copies of all necessary agreements with utility companies for raising overhead wires where necessary to accommodate the oversize/overweight delivery vehicles, if applicable.

4. Plans, Profiles, and Detail Drawings

52. The Certificate Holder shall submit a Site Engineering and Environmental Plan (SEEP) or equivalent documents that, as applicable, shall contain the informational requirements stated in the SEEP Specifications. The Certificate Holder may submit a separate SEEP or equivalent documents for each phase of construction (i.e., tree clearing, civil, turbine erection. The Certificate Holder may submit the SEEP(s) or equivalent documents as a single document accompanied by necessary plans, drawings or other documents, or as a series of separate documents. Where the Applicant previously submitted information as part of its Application that fulfills a particular SEEP obligation, the Certificate Holder must resubmit that information as part of the SEEP or equivalent documents. If the SEEP Specifications conflict with any of these Certificate Conditions, or if the Certificate Conditions require more information than required by the SEEP specifications, the Certificate Conditions shall be controlling.

a) Maps, site plans, profile figures, and environmental controls and construction details incorporating all components of the final layout of the Project shall be provided as compliance filings and shall comply with the requirements set forth in the SEEP Specifications to the extent such requirements are applicable to the Project.

The following plans shall be filed as compliance filings and shall include, as applicable, the informational requirements stated in the SEEP Specifications:

(i) Final Site Security Plan for Facility construction and operations. The Certificate Holder may submit separate Site Security Plans

for construction and operation. Security procedures for construction must be submitted prior to the commencement of construction and security provisions for operation must be submitted prior to the commencement of commercial operation.

(ii) Final Storm Water Pollution Prevention Plan (SWPPP).

(iii) Final Inadvertent Return Plan for horizontal direction drilling (HDD) operations.

(iv) Final Invasive Species Control Plan (ISCP) for the Project. Control measures shall include construction materials inspection and sanitation, invasive species treatment and removal, and site restoration in accordance with the Facility's final approved SWPPP. A post-construction monitoring program (MP) shall be conducted in year 1, year 3 and year 5 following completion of construction and restoration. The MP shall collect information to facilitate evaluation of ISCP effectiveness. At the conclusion of the MP, a report shall be submitted to DPS Staff, DEC, and DAM, and filed with the Secretary, that assesses how well the goal of no net increase of invasive species per the recommendation of the Invasive Plant Species Survey Baseline Report ("Baseline Species Report"), due to construction of the Facility, is achieved. In the event that the report concludes that ISCP goals are not met, and there is an increase of invasive species due to Facility construction, the Certificate Holder, DPS, DEC and DAM will meet to consider why initial control measures were ineffective and the probability of successful additional treatment measures without the need for perpetual treatments.

(v) A Final Health and Safety Plan for the Project. The Certificate Holder may submit separate health and safety procedures for construction and operation. Health and safety procedures for construction must be submitted before the commencement of construction and health and safety procedures for operation must be

submitted prior to commencement of commercial operation.

(vi) Final site-specific construction Quality Assurance and Quality Control Plan (QA/QC Plan), to be developed in coordination with the selected Balance of Plant (BOP) contractor.

(vii) A final Spill Containment and Counter Measures (SPCC) Plan to minimize the potential for unintended releases of petroleum and other hazardous chemicals during Facility construction.

1. The SPCC Plan must be consistent with DEC Spill Reporting and Initial Notification Requirements Technical Field Guidance.

(viii) A Fugitive Dust Control Plan which will specify appropriate measures to be used to minimize fugitive dust and airborne debris from construction of the Facility.

(ix) In consultation with DEC, the Applicant shall develop and submit as a compliance filing: plans and specifications detailing how regulated wetland adjacent area impacts would be avoided through pursuit of the Alternative Wetland Crossing, and if unavoidable, a justification for why the Alternative Wetland Crossing is not practicable;

plans and specifications detailing how potential and proposed impacts to regulated wetlands and/or their adjacent areas would be minimized; and

plans and specifications detailing how unavoidable and minimized impacts to wetlands and/or their adjacent areas will be mitigated through a properly designed construction plan, including a Frac-out Risk Assessment and Contingency Plan, and a Storm Water Pollution Prevention Plan.

The above-mentioned plans and specifications shall include site-specific information related to the proposed crossing, such as (1) site-

specific topography; (2) site-specific soil information; (3) site-specific vegetation or plant-community types; (4) site-specific Frac-out Risk Assessment and Contingency Plan; (5) cross-section views of the proposed crossing depths with profile information regarding the depths of the stream and wetlands; and (6) site-specific geologic information.

53. Final design drawings, site plans, and construction details shall be filed as compliance filings, shall include the informational requirements stated in the SEEP Specifications, and will show wind turbine setback dimensions that meet or exceed the turbine setback requirements in each Town's local law.

54. The Certificate Holder shall provide all information required by the SEEP Specifications, relating to Project component crossings of, or co-locations with, existing Sunoco and other pipelines within the Project Area in the form of a SEEP or equivalent document, as applicable to the Project.

55. The Certificate Holder shall provide shapefile data to DPS Staff for the locations of turbines, collection lines, transmission lines, substation, designated clearing, construction and laydown areas, access ways, limits of disturbance and other Project facilities.

5. Environmental

56. Final Detailed Geotechnical Engineering Report verifying subsurface conditions at each turbine location. The report shall identify appropriate mitigation measures required in locations with highly corrosive soils, soils with a high frost risk, and soils with high shrink/swell potential. The report shall characterize subsurface conditions where HDD is proposed and identify all locations where blasting operations will be required.

57. *Shadow Flicker Impacts Analysis, Control, Minimization and Mitigation Plan*. Shadow flicker caused by wind turbine operations shall be limited to a maximum of 20 hours annually for non-participating receptors in the Town of Fremont and a maximum of 30 hours annually at any non-participating residential receptor in other municipalities, 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.

A summary of the consultation the Certificate Holder shall conduct with the New York State Department of Transportation (NYDOT) regarding any potential shadow flicker impacts on state roads within the Facility area, including a description of the measures the Certificate Holder will adopt to address NYDOT’s concerns regarding shadow flicker, if any. Details of flicker control, minimization and mitigation measures shall be indicated on final design drawings and standards, and site plans as appropriate.

58. Upon completion of construction of the Facility, the Certificate Holder shall conduct an assessment of the need for landscape improvements, including vegetation planting, earthwork or installed features to screen or landscape the O&M building. Based on the results of the assessment, the Certificate Holder shall develop the following in consultation with DPS Staff and file for approval:

a) Plans for any visual mitigation found necessary, and, in connection therewith, plans for removal, rearrangement and supplementation of existing landscape improvements or plantings, as appropriate; and

b) Landscaping plan specifications and materials list (details shall include measures for third party or wildlife damage to any landscape and vegetation plantings); and

The Certificate Holder shall file a *Final Landscaping Plan* with the Secretary within one year of the commercial operation date of the Facility.

59. Cultural Resources Protection Measures, including:

a) Plans to avoid or minimize impacts to archeological and historic resources to the extent practicable. Construction, including site preparation, clearing or other disturbance, shall not be allowed in any areas that have not been reviewed and approved for the presence of cultural resources. The Certificate Holder shall indicate, on a final SEEP or equivalent documents, measures for avoidance of archaeological sites identified within the Facility site. The mapped locations of all identified archaeological sites within 100 feet (31 meters) of proposed Facility-related impacts shall be identified as "Environmentally Sensitive Areas" or similar on the final Facility construction drawings, and marked in the field by construction fencing with signs that restrict access.

b) Final Unanticipated Discovery Plan, establishing procedures in the event that resources of cultural, historical, or archaeological importance are encountered during Facility construction. The plan will include a provision for immediate work stoppage upon the discovery of possible archaeological resources or human remains. Evaluation of such discoveries, if warranted, shall be conducted by a professional archaeologist, qualified according to New York Archaeological Council Standards. Work shall not resume in the area of such resources or remains until written permission is received from the New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP).

c) If complete avoidance of archaeological sites is not possible, the Certificate Holder shall consult with the NYSOPRHP and DPS Staff to determine if Phase II investigations or mitigation is warranted. The results

of any Phase II investigations and/or identification of mitigation measures will be included in the plans.

d) Final C*ultural Resources Mitigation and Offset Plan*, either as adopted by federal permitting agency in subsequent National Historic Preservation Act (NHPA) §106 review, or as proposed in the Application Supplements and as revised in further consultation with New York State Historic Preservation Office (SHPO) in the event that the NHPA §106 review does not require that the mitigation plan be implemented, or as further supplemented pending any negotiations among parties. Proof of mitigation funding awards for offset project implementation to be provided within two years of the start of construction of the Facility shall be included.

60. The Certificate Holder shall make available $20,000 for recreational or aesthetic mitigation for the benefit of Loon Lake. The Certificate Holder shall work with the Town of Wayland to develop such mitigation and shall file a final Loon Lake Mitigation Plan with the Secretary.

61. Bat Curtailment Plan 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 of 6.0 m/s, 30 minutes prior to sunset through 30 minutes after sunrise, when temperatures are greater than 10 degrees Celsius; and

b) methods for monitoring and verifying compliance with curtailment requirements.

62. The Certificate Holder shall submit a review of curtailment operations at least 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.

63. For bald eagles (*Haliaeetus leucocephalus*) and Northern Long Eared Bats (*Myotis septentrionalis*) (NLEB), a final *Endangered or Threatened Species Mitigation Plan* (ETSMP) for the take of

bald eagles and for the take of NLEB as estimated by DEC Staff shall be filed within six months after the date of issuance of the Certificate. The ETSMP shall be prepared in consultations with and accepted by the U.S. Fish and Wildlife Service, DEC and DPS Staff. Said consultations being open to any party desiring to participate or observe, and shall meet the requirements of 6 NYCRR §182.11. The avoidance and minimization measures in the ETSMP that require installation shall be installed prior to operation of the Facility. At a minimum, the ETSMP shall contain:

a) a demonstration that the ETSMP results in a positive benefit to the NLEB and not just an offset for any potential take of the species;

b) a detailed description of measures to fully avoid impacts to bald eagles, or a demonstration that measures to fully avoid impacts is impracticable. If the Certificate Holder demonstrates to the satisfaction of DEC and DPS Staff that full avoidance of impacts to bald eagles is impracticable, the ETSMP must demonstrate that the plan results in a positive benefit to bald eagles and not just an offset for any potential take of the species;

c) detailed net benefit calculations based on the actual location and type of avoidance or minimization measures to be taken;

d) full source information used as inputs to the net benefit calculations;

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

f) a demonstration of the Certificate Holder’s financial capability and commitment to fund and execute such avoidance or mitigation options, management, maintenance and monitoring for the life of the Project;

g) a consideration of potential avoidance and mitigation measures identified by DEC Staff;

h) a consideration of potential sites identified by DEC Staff for avoidance or mitigation measures; and

i) the identification and detailed description of the additional avoidance or minimization measures developed to minimize potential take of bald eagles and NLEB that will be undertaken by the Certificate Holder.

64. A *Post Construction Avian and Bat Monitoring and Adaptive Management Plan* shall be filed at least 60 days prior to the start of commercial operation of the Facility. The plan will include direct impact fatality studies and habituation/avoidance studies. The details of the post-construction studies (i.e., the start date, number and frequency of turbine searches, search area, bat monitoring, further monitoring beyond the second year, etc.), will be described following DEC's June 2016 *Guidelines for Conducting Bird and Bat Studies at Commercial Wind Energy Projects*, for Standard Post-Construction Studies and through consultation between the Certificate Holder, USFWS, and DEC. Post-construction monitoring will be conducted for a minimum period of at least two (2) years but no more than three years.

65. If wetland mitigation is required, a final *Wetlands Mitigation Plan* addressing impacts to federal and State-regulated wetlands shall be developed in coordination with DEC, DPS Staff, and the U.S. Army Corps of Engineers (ACOE) to satisfy applicable federal and State regulations. The plan shall provide for State-regulated wetland mitigation in the same watershed to the maximum extent practicable. If mitigation of State-regulated wetlands is required, the plan shall separately address impacts to each of the wetlands benefits described in Environmental Conservation Law § 24-0105(7). The plan will include:

a) the creation of compensatory wetlands at a ratio consistent with State and federal regulations;
b) performance standards for determining wetland mitigation success;

c) specifications for post construction monitoring for at least five years after completion of the wetland mitigation; and

d) 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 five years.

66. In the event that, after a period of five years following construction of the Facility and the implementation of the Wetland Mitigation Plan, all wetland performance standards have not been achieved, the Certificate Holder shall develop a Wetland Mitigation Remedial Plan in coordination with DEC, DPS Staff, and the ACOE (if applicable), and submit it to the Secretary for approval. The Wetland Mitigation Remedial Plan must describe 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 the approved schedule.

67. Long-range *Facility and Corridors Management Plan* shall be filed within one year of the commercial operation date. The plan shall address specific standards, protocols, procedures and specifications for:

a) vegetation management recommendations, based on on-site surveys of vegetation cover types and growth habits of undesirable vegetation species;

b) all proposed chemical and mechanical techniques for managing undesirable vegetation. Herbicide use and limitations, specifications, and control measures will be included, if proposed;

c) substation Fence-line Clearances, and Overhead Wire Security Clearance Zone specifications, indicating applicable safety, reliability and operational criteria;

d) inspection and target treatment schedules and exceptions;

e) standards and practices for inspection of facilities easements for erosion hazard, failure of drainage facilities, hazardous conditions after storm events or other incidents;

f) review and response procedures to avoid conflicts with future use encroachment or infrastructure development;

g) wetland and stream protection areas, principles and practices; and

h) host landowner notification procedures.

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) The locations of all turbines identified with Geographic Information System (GIS) coordinates and GIS files;

b) turbine dimensions, including hub height and diameter of tip blades rotation;

c) 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;

d) 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. 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;

(ii) Apparent Sound Power levels from the turbines at any wind speed at hub height shall not exceed the final overall broadband (dBA) and the 16 Hz, 31.5 Hz, and 63 Hz full octave band levels

(linear) presented in the Application or any subsequent supplement, as measured by following the IEC 61400-11 Standard.

e) 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 for the Towns of Cohocton, Dansville, Fremont and Wayland, and the regulatory limits of Conditions 72. In addition, the revised sound modeling will show conformance with the following design goals:

(i) 40 dBA L(night-outside), annual equivalent continuous average sound level from the Facility outside any existing permanent or seasonal non-participating residence.

(ii) 50 dBA L(night-outside), annual equivalent continuous average nighttime sound level from the Facility outside any existing participating residence.

(iii) 50 dBA L(night-outside), annual equivalent continuous average nighttime sound level from the Facility across any portion of a non-participating property except for portions delineated as wet lands as demonstrated through compliance with the limit at worst-case locations. The Applicant shall include a demonstration of how it determined the worst-case locations with noise data reflecting the final turbine array.

(iv) 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 Certificate Conditions for the Facility shall be evaluated by the Certificate Holders by following a Sound Testing Compliance and Noise Complaint Protocol that shall follow the provisions and procedures for post-construction noise performance evaluations indicated in the Application and as stated in the Order, in addition to:

a. monitoring for compliance with maximum noise limit of 65 dB Leq-1-h at the full octave frequency bands of 31.5, and 63 Hertz outside of any non-participant residence 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).

b. during the Sound Compliance Tests described in Certificate Condition 70, and any subsequent sound testing related to compliance or violations of the noise limits applicable to the Facility, the uncertainty factor in ANSI S12.9 Part 3 Clause 7.3 should be applied against the Facility.

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 filed with 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 all noise sources from the 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 and 55 dBA Leq (8-hour) for any participant residence existing as of the issuance date of this Certificate.

b) Not produce any audible prominent tones, as defined under ANSI Sl2 .9 Part 4-2005 Annex C at any non-participant 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 31.5, and 63 Hertz outside of any non-participant residence 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 non-participant residence 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 (l-hour) at the outside of any non-participating residence 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. Regarding Noise Complaints:

a) The Certificate Holder shall 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 of Cohocton, Dansville, Fremont and Wayland with a phone number, email address and mailing address where complaints can be sent, 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 the first two years of commercial operations and quarterly thereafter, 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; 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 non-participant residence existing as of the issuance date of this Certificate with measured or modeled sound levels exceeding 40 dBA Leq-1-hr, 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 minimization measures to avoid or minimize 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 the proposed measures 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 is required to 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. These records shall be maintained for five years from occurrence.

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; and

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

VI. Facility Construction and Maintenance

A. 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 DPS's regulations regarding the protection of underground facilities (16 NYCRR Part 753).

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

78. The Certificate Holder shall establish funding for an independent, third-party environmental monitor to oversee compliance with environmental commitments and permit

requirements. The environmental monitor shall perform daily inspections of construction work sites and, in consultation with DPS Staff, issue regular reporting and compliance audits. The Certificate Holder shall identify and provide qualifications and contact information for the independent, third-party monitor for environmental compliance monitoring; there shall be an independent, third party agricultural monitor. If the Department of Agriculture and Markets (DAM) Staff agrees that the independent third-party 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 environmental monitor 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 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, Section 401 Water Quality Certification, and the SEEP or equivalent documents.

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

    a) 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 attendee list for corrections or comments, and thereafter the Certificate Holder shall issue the finalized meeting minutes; and

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 meeting with the same format as outlined above.

82. Modifications to the approved SEEP or equivalent documents:

a) All proposed changes to the approved SEEP or equivalent documents shall be reported to DPS Staff. DPS Staff will refer any proposed changes that will not result in any increase in adverse environmental impacts, or that are not directly related to contested issues decided by the Hearing Examiners or the Siting Board during the proceeding, to the Chief of the Environmental Certification and Compliance Section for approval. Proposed changes to the SEEP or equivalent documents shall be reviewed expeditiously. DPS Staff will refer all other proposed changes to the Siting Board for approval.

b) Upon being advised that DPS Staff will refer a proposed change to the Siting Board, the requesting Certificate Holder shall notify all parties to the proceeding, as well as property owners and lessees whose property may be affected by the proposed change. The notice shall:

(i) describe the original conditions and the requested change;

(ii) state that documents supporting the request are available for inspection at specified locations; and

(iii) state that persons may comment by writing or calling (followed by written confirmation) the Secretary within 21 days of the notification date. Any delay in receipt of written confirmation will not delay Siting Board action on the proposed change.

c) The Certificate Holder shall not execute any proposed change until the requesting Certificate Holder has received oral or written approval, except in emergency situations threatening personal injury, property, or severe adverse environmental impact. Any oral approval from DPS Staff will be followed by written approval from the Chief of the Environmental Certification and Compliance Section in the Office of Electric, Gas and

Water, or the Siting Board as soon as possible thereafter.

83. Construction and routine maintenance activities on the Project shall be limited to 7:00 a.m. to 7:00 p.m. Monday through Saturday, with the exception of wind turbine erection activities which may need to occur during extended hours beyond this schedule on an as-needed basis to address unusual circumstances.

    a. Construction work hour limits apply to Facility construction period 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.

84. At least two weeks before construction begins in any project area, markers used to delineate/define the boundary of regulated freshwater wetlands, their associated adjacent areas, as well as streams, and the demarcated limits of disturbance for the project shall be left in place and remain undisturbed until completion of construction activities and restoration of the impacted area.

    a. The Certificate Holder shall stake and/or flag the following:

        i. the limits of clearing;

        ii. the limits of disturbance;

        iii. all on or off right-of-way (ROW) access roads;

iv. other areas needed for construction such as, but not limited to, turbine work areas, laydowns, and storage areas;

v. all wetlands;

vi. designated restrictive areas and sensitive environmental resources; and

vii. streams and waterbodies.

b. Legible “protected area” signs, exclusionary fencing, and erosion controls pursuant to the approved SWPPP shall be installed along the approved work area to protect and clearly identify the boundaries of non-work areas associated with wetlands, waterbodies, and wetland/waterbody setbacks (e.g., Additional Temporary Work Space setbacks, refueling restrictions, etc.). This shall be done prior to any disturbance or vehicular traffic through such areas. Signs, fencing, and silt fence must be removed following completion of the project and after all disturbed areas are appropriately stabilized and planted as described in the SWPPP and in certificate conditions.

c. Except where crossed by permitted access roads or through use of temporary matting, streams shall be designated “No Equipment Access” or similar on the final Facility construction drawings and ROW clearing plans and marked in the field. The use of motorized equipment is prohibited in these areas.

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 construction plans (SEEP or equivalent documents). If a local contractor is used for the work, the local contractor’s facility may also be used as a marshaling yard.

86. The Certificate Holder shall organize and conduct monthly site-compliance inspections for DPS Staff as needed during construction and restoration of the Facility site.

a. 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.

b. 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, other legal requirements and commitments, 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.

c. 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 agencies involved in the inspection audit.

B. Environmental

87. All equipment used within bed or banks of streams or in regulated wetlands and 100-foot adjacent areas must be inspected daily for leaks of petroleum, other fluids, or contaminants; equipment may only enter a stream channel if found to be free of any leakage. A spill kit must be available at the immediate work site and any equipment observed to be leaking must be removed from the work site, and leaks must be contained, stopped, and cleaned up immediately.

88. Any construction debris (e.g., building materials, excess sediment, refuse from the work site) shall be completely removed prior to completion of restoration of State-regulated freshwater wetland and adjacent areas, as applicable, and disposed of at a permitted waste disposal facility authorized to receive such material. No debris shall remain in State-

regulated freshwater wetlands or adjacent areas, or mapped floodplains.

89. Cleared vegetation and slash will not be buried or burned.

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.

    a. While clearing natural vegetation in stream corridors, clearing shall be limited to that material which poses a hazard or hinderance to the construction activity.

        i. Snags that provide shelter in streams for fish shall not be disturbed unless they cause serious obstructions, scouring, or erosion.

        ii. Trees shall not be felled into any stream or onto the immediate stream bank.

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, construction plans shall indicate locations of stockpiles to be established for removal from site or future landowner resource recovery.

92. 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. Erosion and sediment control measures shall be constructed and implemented in accordance with the SWPPP.

C. Threatened and Endangered Species

95. To reduce mortality to bats during construction, all tree clearing activities shall be conducted between November 1 and April 1 in all occupied habitat areas and unless otherwise approved by DPS Staff, in consultation with DEC. This limitation does not include trees less than or equal to 3 inches in diameter at breast height (DBH).

96. To achieve full avoidance of direct impacts to NLEB maternity roost sites, no tree clearing activities will occur at any time within 150 feet of any identified maternity roosts, and all tree clearing activities proposed to occur within one and one half (1.5 miles) of the roost site must be conducted between November 1 and April 1.

97. Excluding bald eagles (*Haliaeetus leucocephalus*), if at any time during construction and operation of the Facility, an active nest of any federally, or State, listed threatened or endangered bird species is discovered within the Facility site (which for purposes of this Condition includes an active construction, ground clearing, grading or maintenance site), the regional DEC Natural Resources Supervisor and DPS Staff will be notified within forty-eight (48) hours of discovery, and the nest site will be marked. An area 500 feet in radius around the nest will be posted and avoided to the maximum extent practicable until notice to continue construction at that site is granted by DPS Staff, in consultation with the regional DEC Natural Resources Supervisor. The nest or nest tree(s) will not b approached under any circumstances unless authorized by the DEC regional Natural Resources Supervisor.

98. If at any time during construction or operational life of the Project, a nest of a bald eagle is located, or if bald eagles are observed in the Project area exhibiting breeding behavior, the DPS Staff and the DEC Regional office shall be notified within forty-eight (48) hours of discovery or observation, and

prior to any disturbance of the nest or immediate area around the nest or where eagles were seen exhibiting breeding behavior. An area one quarter (0.25) mile in radius from the bald eagle nest tree if there is no visual buffer, or an area at least six hundred sixty (660) feet in radius if there is a visual buffer, will be posted and avoided until notice to continue construction, ground clearing, grading, maintenance or restoration activities at that site is granted by DPS Staff and the Region 8 Natural Resources Supervisor. The nest(s) or nest tree(s) will not be approached under any circumstances unless authorized by DPS Staff and the Region 8 Natural Resources Supervisor.

99. If at any time during the life of the Project, any dead, injured or damaged federally or State-listed threatened or endangered species, or their parts, nests or eggs are discovered within the Project area by the Certificate Holder, its designated agents, or a third party that reports to the certificate Holder, the Certificate Holder shall immediately (within 24 hours) contact the Region 8 Natural Resources Supervisor (and the U.S. Fish and Wildlife Service, if a federally listed species), to arrange for recovery and transfer of the specimens, and obtain instruction for recording of the discovery and transportation of the specimen.

100. If at any time during construction and operation of the Facility, a northern harrier, short-eared owl or upland sandpiper nest is located, or if any of these species are observed exhibiting breeding behavior within the Project area, the DEC Regional Office and DPS Staff will be notified within forty-eight (48) hours of discovery, and prior to any disturbance of the nest or immediate area or where northern harriers, short-eared owls or upland sandpipers were observed exhibiting breeding activity. An area 660 feet in radius from the nest tree will be posted and avoided until notice to continue construction, ground clearing, grading, maintenance or restoration activities at that site is granted by DPS Staff and the Region 8 Natural Resources Supervisor. The nest(s) or nest tree(s) will not be approached under any circumstances unless authorized by DPS Staff and the Region 8 Natural Resources Supervisor.

D. Wetlands and Streams, Vegetation, and Invasive Species

101. All necessary precautions shall be taken to preclude contamination of any wetland or waterway by suspended solids, sediments, fuels, solvents, lubricants, epoxy coatings,

paintings, concrete, leachate, or any other environmentally deleterious materials associated with the Project.

a. All equipment and machinery, excluding dewatering pumps, shall be stored and safely contained more than 100 feet landward of the regulated wetlands and waterbodies at the end of each work day. This will serve to avoid the inadvertent leakage of deleterious substances into the regulated area. Dewatering pumps operated closer than 100 feet from the wetland or waterbody must be on an impervious surface and absorbents capable of containing any leakage of petroleum products.

b. Equipment operation in the water is prohibited. With heavy equipment, the bucket may enter the water as long as water clarity is not impacted.

102. Fuel or other chemical storage tanks shall be located in an area greater than 300 feet landward of the regulated wetland. If the above requirement cannot be met by the Certificate Holder, the storage areas must be designed to completely contain any and all potential leakage. Such a containment system must be approved by DEC staff in writing prior to installation of the storage tank.

103. All mobile equipment, excluding dewatering pumps, must be fueled in a location at least 100 feet from wetlands and waterbodies 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.

104. 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. Any spills shall be reported in accordance with State and federal regulations.

105. All fill material 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, metal objects, and all invasive species.

The introduction of materials toxic to aquatic life is expressly prohibited.

106. Turbid water resulting from dewatering operations, including water that has infiltrated the construction site, shall not be discharged directly or allowed to enter any wetland, stream or water body within the Project area. Visibly turbid discharges from blasting, land clearing, grading, excavation, dewatering, or dredging operations and from construction activities, including water that has infiltrated the construction site, shall not enter any wetland or surface waterbody, including those downstream or outside the construction zone.

107. All disturbed soils within regulated freshwater wetlands and the associated adjacent areas must be seeded with a native seed mix or 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.

108. Restoration of impacted 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 and replanted with native shrubs and herbs at densities as existed prior to construction. Seeding with an appropriate native wetland species mix such as an Ernst Wetland Mix (OBL-FACW Perennial Wetland Mix, OBL Wetland Mix, Specialized Wetland Mix for Shaded OBL-FACW, or equivalent) shall be completed to help stabilize the soils.

    b) Restored areas shall be monitored for a minimum of 5 years. Monitoring shall continue until an 85% cover of native 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. Performance requirements contained in the approved “Invasive Species Monitoring and Control Plan” must also be achieved.

        i. At the end of the first year of monitoring, the Certificate Holder shall replace lost wetland or

wetland-adjacent area plantings if the survival rate of the initial plantings is less than 80%.

ii. At the end of the second year of monitoring, if the criteria for restoration plantings (85% cover, 80% survival rate) are not met, the Certificate Holder must evaluate the reasons for these results, and develop in consultation with DEC and submit as a Compliance Filing a “Wetland Planting Remedial Plan.”

1. The “Wetland Planting Remedial Plan must describe:

a. the reasons for poor survival;

b. actions necessary to correct the situation and ensure successful restoration; and

c. the schedule for conducting the remedial work.

2. Once approved, the “Wetland Planting Remedial Plan” will be implanted according to the approved schedule.

109. Cleared vegetation and slash from wetlands and adjacent areas will not be burned or buried within the wetland or adjacent areas. The vegetation must be disposed of outside of the wetland and adjacent areas, but slash that is cut may be left in place (drop and lop or piled in dry or seasonally saturated portions of State-regulated freshwater wetlands and 100-foot adjacent areas to create wildlife brush piles).

110.

A. Installation of underground collection lines in wetlands shall be performed using the following methods, to be indicated in the final SEEP or equivalent documents and environmental controls documents:

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; and

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

B. In the event of the installation of underground collection lines in State-regulated wetlands or their adjacent areas, the Certificate Holder shall develop in consultation with DEC and submit as a Compliance Filing, a Wetland Crossing Plan (Cables) that includes the following information:

a. Site Constructability Plan. The Site-Specific Constructability Assessment shall be conducted by an experienced and qualified, 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. Trench Wetland Crossing Assessment. For all wetland crossings determined not to be crossed via a trenchless method, a site-specific trench crossing assessment must be conducted. The assessment should address the following:

1. Specific plans and alignment for each wetland crossing; and

2. Construction measures that meet the standards set forth in this Certificate.

C. Any construction activities completed within State-regulated wetlands shall adhere to the following requirements:

b. Excavation, installation, and backfilling must be done in one continuous operation;

c. Work should be conducted during dry conditions without standing water or when the ground is frozen, where practicable;

c. In areas containing amphibian breeding areas, work in wetlands or adjacent areas should not occur during the peak amphibian breeding season (April 1 to June 15);
d. Before any trenching occurs, upland sections of the trench shall be backfilled or plugged to prevent drainage of possible turbid trench water from entering the stream or wetland;

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

f. If there is an inadvertent puncturing of a hydrologic control for a wetland, the puncture shall be immediately sealed, and no further activity shall take place until DPS and DEC staff are notified and a remediation plan to restore the wetland and prevent future dewatering of the wetland has been approved by the agency staffs;

g. Only the excavated wetland topsoil and subsoil shall be utilized as backfill;

h. In wetland areas, the topsoil shall be removed and stored separate from subsoil. The top 12 inches of wetland top soil shall be removed first and temporarily placed onto a geo-textile blanket running parallel to the trench, if necessary;

i. Where swamp mats are not practical, wide-track or amphibious excavators shall be used for wetland installations;

j. Subsoil dug from the trench shall be side-cast on the opposite side of the trench on another geo-textile blanket running parallel to the trench, if necessary;

k. 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;

l. Trench shall be backfilled with the wetland subsoil and the wetland top soil shall be placed back on top. All excess materials shall be completely

removed to upland areas more than 100 feet from the wetland and suitably stabilized; and

m. When backfilling occurs, the subsoil shall be replaced as needed, and then covered with the top soil, such that the restored top soil is the same depth as prior to disturbance.

D. The Certificate Holder shall notify the DEC Region 8 Regional Supervisor of Natural Resources via e-mail one week prior to the start of ground disturbance in each State-regulated wetland or adjacent area.

E. This Certificate does not authorize any permanent alteration of wetland hydrology.

111. A. Installation of any temporary or permanent access roads through wetlands shall be performed using the following methods, to be indicated in the final SEEP or equivalent documents and environmental controls documents:

a. vegetation and topsoil shall be removed;

b. a layer of geotextile fabric shall be placed in the location of the wetland crossing; and

c. at least six inches of gravel shall be placed over geotextile fabric in the location of the wetland crossing.

B. Construction access within State-regulated wetlands shall adhere to the following:

a. Swamp mats must be used in any regulated freshwater wetlands for construction activities.

b. Where any temporary or permanent access roads are to be constructed through wetlands, a layer of geotextile fabric shall be placed across the wetland after removal of vegetation and before any backfilling occurs. The final road surface shall be covered with a minimum 1-inch depth of gravel in the area of the wetland crossing.

c. Prior to installation in State-regulated wetlands and adjacent areas, as applicable, swamp mats must be cleaned of invasive species following protocols

described in the final “Invasive Species Control Plan.”

d. Swamp mat removal must be conducted from adjacent mats (i.e., removal equipment always stationed on a mat) as soon as practicable, but no later than four months following installation of the overhead line. The Environmental Monitor shall provide notification to the DEC Region 8 Natural Resources Supervisor and the DEC Chief of the Major Project Management, Division of Environmental Permits, 625 Broadway, Albany, NY when compliance with this condition has been achieved.

112. To control the spread of invasive insects, the Certificate Holder shall provide training for clearing and construction crews to identify the 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.

113. Waste concrete or concrete from truck cleanout activity and any wash water from trucks, equipment, or tools if done on site, must be contained in a manner that will prevent it from escaping into the streambank or into the stream channel and entering the stream, or entering wetland, or any other waterbody. Disposal of waste concrete or wash water should be at least 100 feet from any wetland, waterbody and agricultural field, to the maximum extent practicable.

a. If a discharge occurs, DEC Region 8 Supervisor of Natural Resources and DEC Region 8 Regional Water Engineer shall be contacted within two hours of the event.

114. In-stream work not associated with either Stream Crossing Plan (Bridges & Culverts) or Stream Crossing Plan (Cables) shall only occur in dry conditions. Trenchless methods or dewatering measures (e.g., dam and pump or flume) must be used. If approved measures fail to divert all flow around the work area, in-stream work must immediately stop until dewatering measures are in place and properly functioning again.

a. The Certificate Holder shall utilize free span temporary equipment bridges to cross all streams with flow at the time of the proposed crossing with a

classification of A, AA, A-S, B or C, with or without a standard of (T) or (TS).

i. Temporary stream crossings are not authorized as waterbodies, utilizing trenchless pipeline installation techniques.

ii. All structures must be placed at bankfull elevation or higher and be able to pass no less than a Q5 flow interval 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.

iii. Bridges may not be dragged through the stream and must be suitably anchored to prevent downstream transport during a flood.

iv. Fill may not be placed within the stream channel below bankfull elevation and placement of abutments or fill is authorized only above and outside bankfull boundaries.

v. Geotextile fabric must be placed below and extending onto the bank and suitable siderails built into the bridges to prevent sediment from entering the waterbody.

vi. Bridges with a total length of 20 feet or less must be installed only from one side of the stream.

vii. Bridges greater than 20 feet long may be installed with equipment from both sides of the stream. In which case, only one piece of equipment may cross the stream one time via a ford located directly over the centerline of the installed pipeline path.

viii. Center supports may be used on bridges greater than 30 feet long. In which case, the supports must be placed no closer than 15 feet to one another and may use solid materials or a single, round culvert.

b. Before trenching through stream banks occurs, upland sections of the trench shall be backfilled or plugged

to prevent drainage of possible turbid trench water from entering the stream. All in-stream work requiring trenching (see Site-Specific Constructability Assessment) will comply with the following:

i. All stream crossings shall be done in the dry.

ii. Trenches shall be operated for the installation and backfilled in one continuous operation.

c. If a one-time crossing of a State-protected stream occurs as part of an installation of a temporary bridge and a tire mat is used the following restrictions apply:

i. The mat must follow the contour of the streambed and allow for a low-flow channel and not change the flow path of the stream.

ii. The mat shall be removed immediately after the crossing of the stream occurs.

d. Intermittent and ephemeral streams must be crossed during times of no flow, while perennial streams must be crossed using a temporary water control device such as a dam and pump or cofferdam to isolate the work area and redirect the water around the work site.

e. Construction in State-protected streams shall comply with work period restrictions established in consultations with DEC that are protective of fish spawning and migration. In protected streams with the standard of supporting trout species, all instream work, as well as any work that may result in the suspension of sediment, is prohibited during the trout spawning and incubation period commencing October 1 and ending May 31, unless the Certificate Holder receives prior approval from the DEC Region 8 Supervisor of Natural Resources, which approval shall not be unreasonably delayed, conditioned or withheld, shall be subject to the dispute resolution procedures contained herein and shall be finally approved through the Compliance Filing Process.

f. Dates for the seasonal work period restrictions on in-stream work during Facility construction shall be

included in the Compliance Filing and noted on final construction detail drawings.

115. 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.

116. If any trees and shrubs growing within 50 feet of streams need to be cut in the process of constructing overhead power line crossings, they shall be cut off with at least 2 feet of the stump remaining. Stumps and root systems shall not be damaged to facilitate stump sprouting. Trees shall not be felled into any stream or onto the immediate stream bank. All trees and shrubs cut within the 50-foot buffer area shall be left on the ground.

117. 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.

118. A. The creation, modification or improvement of any permanent road/stream crossing must meet the following requirements:

a) culvert pipes shall be designed to safely pass the 2% annual 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; and

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, as practicable.

B. If the crossing of State-protected streams is necessary, after consultation with DEC, the Certificate Holder shall submit as a Compliance Filing, a “Stream Crossing Plan (Bridges & Culverts),” that must include detailed site-

specific plans that describe and illustrate the layout and alignment of each crossing, and the proposed crossing method. At a minimum, the plan must include:

a. the alignment of roads, bridges, and culverts;

b. construction details including elevation details for culverts and the adjoining streambed;

c. drainage area and flow calculations for the crossing location;

d. the location, quantity, and type of any fill associated with construction;

e. the location and installation details of any dewatering measures; and

f. a description of the dry crossing methods that will be used to install the crossing.

Where permanent crossings are required (see Stream Crossing Plan (Bridges & Culverts)) bridges should be utilized where practicable. If culverts are used, they should be designed as follows:

a. To safely pass the 2% annual chance storm event;

b. 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; and

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

C. After consultation with DEC, the Certificate Holder shall submit as a Compliance Filing, a stream crossing plan for the cable and access road crossing of stream P-3-57-5-49-9-2, that complies with the following: the proposed crossing will minimize the potential impacts to stream P-3-57-5-49-9-2 resulting from sedimentation and turbidity during construction and operation of the Facility by developing the following measures in consultation with NYSDEC, and also included within the Facility’s SWPPP:

a. Implementation of appropriate stormwater controls (e.g., silt fence, filter sock, straw bales) during construction of the facility;

b. Installation of a grass filter strip with a consistent minimum width of at least 10 feet to be located between the access road and the stream;

c. Designing the access road such that water will pass over or through the road without creating any upslope ponding, erosion, or turbidity of the stream; and

d. The agreed-upon measures will also be included in the Facility's final SWPPP.

D. After consultation with DEC, the Certificate Holder shall submit as a Compliance Filing, a "Stream Crossing Plan (Cables)" that includes a site-specific plan for each cable crossing of a State-protected stream and addresses the following:

a. Site-Specific Constructability Assessment. The Site-Specific Constructability Assessment shall be conducted by an experienced and qualified, 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 stream crossing.

b. Trench Stream Crossing Assessment. For all stream crossings determined not to be crossed via a trenchless method, a site-specific trench crossing assessment must be conducted. The assessment should address the following;

i. the alignment of the cable crossings;

ii. the location and installation details of any dewatering measures; and

iii. a description of the dry crossing methods that will be used to install the crossing.

E. For all trench crossings of State-protected streams, after consultation with DEC, the Certificate Holder shall submit as a Compliance Filing, a site-specific Vertical Adjustment

Potential (VAP) analysis and Lateral Adjustment Potential (LAP) for each State-protected stream crossing not located in bedrock to determine that the separation between the top of the buried interconnect and the stream bed is sufficient to prevent exposure of the line from stream erosion both vertically and horizontally. The “Exposure of Cable by Stream Report” shall be conducted and certified by a qualified engineer licensed to work in New York and must include all calculations associated with the VAP and LAP analysis as well as a definitive statement by the engineer that the separation will prevent exposure of the line at each stream crossing because of stream erosion. Stream crossings may only be started after NYSDEC provides written approval of the report.

F. The Certificate Holder shall notify the DEC Region 8 Regional Supervisor of Natural Resources via e-mail one week prior to the start of any clearing within 100 feet of State-protected streams and/or installation of temporary or permanent stream crossing for access or travel routes.

119. Horizontal Directional Drilling (HDD):

a. Erosion and sediment control will be used at the point of HDD, so that drilling fluid shall not escape the drill site and enter streams or wetlands.

b. The disturbed area will be restored to original grade and reseeded upon completion of directional drilling.

c. Drilling fluid circulation for HDD installations shall be maintained to the extent practical.

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

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

f. 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.

g. The Certificate Holder shall submit, in consultation with DEC Staff prior to submission as a Compliance Filing, a Frac-Out Risk Assessment and Contingency

Plan that addresses inadvertent drilling fluids surface returns that occur in any environmentally sensitive area (i.e. wetlands and water bodies). In the event of inadvertent drilling fluid surface returns, the returns shall be monitored and documented as described in the Frac-Out Risk Assessment and Contingency Plan.

h. Drilling operations shall be suspended if the surface returns pose a threat to the resource or to public health and safety.

i. Removal of released fluids from environmentally sensitive areas shall take place only if the removal does not cause additional adverse impacts to the resource.

j. If inadvertent drilling fluids surface returns occur in an environmentally sensitive area, DPS Staff and the DEC Region 8 Supervisor of Natural Resources 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.

k. While conducting HDD operations under wetlands, 100-foot adjacent areas, and streams, the Certificate Holder will maintain close monitoring for possible “frac-outs” that would result in the release of drilling fluids to sensitive areas as described in the Frac-Out Risk Assessment and Contingency Plan.

l. The Certificate Holder will maintain a HDD spill response plan and the necessary response equipment will be kept on-site for the duration of the drilling.

m. All releases of drilling fluids to sensitive areas (e.g., wetlands, state-regulated 100-foot adjacent areas, waterbodies) shall be reported to the DEC Region 8 Supervisor of Natural Resources and DPS Staff within two hours or as soon as practicable considering internet and cellphone coverage in the area.

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

121. Any in-stream work or restoration authorized by this Certificate, including the installation of structures and bed materials, shall not result in impediment to passage of native aquatic organisms, including fish. Any in-stream work (excluding dewatering practices associated with dry trench crossings) and restoration shall be constructed in a manner which maintains low flow conditions and preserves water depths and velocities similar to undisturbed upstream and downstream reaches necessary to sustain the movement of native aquatic organisms. Any in-stream structures placed in a stream must not create a drop height greater than 6 inches.

    a. All disturbed stream banks below the normal-high water elevation must be graded no steeper than 1 vertical to 2 horizontal slopes, or to the original grade as appropriate, and adequately stabilized. All other areas of soil disturbance above the ordinary high-water elevation, or elsewhere shall be:

        i. stabilized with natural fiber matting;

        ii. seeded with an appropriate perennial native conservation seed mix; and

        iii. mulched with straw within two days of final grading. Mulch shall be maintained until suitable vegetation cover is established. Destroyed bank vegetation shall be replaced with shrub willow or silky dogwood planting, native trees, or other suitable species.

    b. To reduce thermal impacts to exposed streams, native woody plants such as shrub willows, dogwoods, appropriate native trees, or other native riparian species will be planted at all stream crossings, which have less than 50% cover due to construction impact of any such vegetation and is to be restored following a temporary impact. Planting may be done at the tops of banks and/or among rocks along the toes of slopes.

VII. <u>Facility Operation</u>

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

123. The Certificate Holder shall operate the Facility in full compliance with the applicable reliability criteria of NYSEG, 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 Siting Board, or the Commission after the Siting Board's jurisdiction has ceased, by filing with the Secretary and NYSEG a copy of the NYISO notice.

124. 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 NYSEG Control Center, or its successor, in order to maintain the reliability of the transmission system.

125. 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.

126. The Certificate Holder shall work with NYSEG engineers and safety personnel on testing and energizing equipment in the authorized interconnection and collection substations. If NYSEG's testing protocol is not used, a testing protocol shall

be developed and provided to NYSEG for review and acceptance. The Certificate Holder shall file with the Secretary a copy of the final testing design protocol within 30 days of NYSEG's acceptance.

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

128. 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 NYSEG. 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 NYSEG, NYISO, NYSRC, NERC and the NPCC to prevent any future occurrences.

129. If NYSEG or the NYISO bring concerns to the Siting Board or 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 NYSEG find such facilities are causing, or have caused, reliability problems to the New York State Transmission System.

130. If, subsequent to the completion of construction of the Facility, no electric power is generated and transferred out of the Facility for a period of more than a year, DPS Staff or the Commission may consider advising the Siting Board that the amendment, revocation or suspension of the Certificate may be appropriate.

131. 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 NYSEG 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 NYSEG 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 one 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 one 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.

132. 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 shall be notified no later than 12 hours following such an event.

133. 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 blades, 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, the repairs undertaken and a diagram of the wind turbine blade.

VIII. Water Control Devices

134. All temporary water control devices or cofferdams must adhere to the following:

a. Any temporary cofferdam shall be constructed of clean materials such as sheet piling, jersey barriers, inflatable dams, or sandbags that will not contribute to turbidity or siltation of the waterbody or wetland, and non- erodible materials, so that failure will not occur at Q2 or higher flow conditions. Where practicable, an upstream or interior membrane shall be installed to control percolation and erosion. Sandbags shall be of the filter fabric type, double bagged and individually tied to prevent sand leakage and only clean sand (e.g. free of debris, silt, fine particles or other foreign substance) shall be used as fill. They shall be placed and removed manually to prevent spillage. Straw bale sediment control basins are prohibited;

b. Fill materials must not come from the waterbody or wetland;

c. The water control structure or cofferdam shall not impair downstream water flow in the waterbody or water flow into and/or out of a wetland;

d. If exposed for an extended period of time, excavated or temporarily stockpiled soils or other materials should be covered and protected to reduce runoff of fines which may cause a turbidity problem and to prevent rainwater from soaking the materials and rendering them unsuitable for backfill;

e. The work area shall remain isolated from the rest of the stream or wetland until all work in the streambed or bank, or wetland is completed, concrete is thoroughly set and the water clarity in the coffered area matches that of the open water;

f. If a dam and pump diversion is used as part of a dry open-cut crossing, the pump and diversion must be

monitored continuously from time of installation until crossing is completed, streambed restored, and diversion is removed;

g. Dewatered sections of stream cannot exceed 50 linear feet (measured from the inside edges of the cofferdams) for each stream crossing unless the Certificate Holder has prior written approval from the NYSDEC Region 8 Supervisor of Natural Resources, which approval shall not be unreasonably delayed, conditioned or withheld and shall be subject to the terms of the dispute resolution procedures contained in this Certificate;

h. All temporary water control structures shall be removed in their entirety upon completion;

i. All fish trapped within the cofferdam shall be netted and returned, alive and unharmed, to the water outside the confines of the cofferdam, in the same stream, before the dewatering process;

j. Dewatering within the coffer(s) shall be performed so as to minimize siltation and turbidity. Water taken from the coffered area will be passed through settling basins, filter bag, or well-vegetated upland areas more than 100 feet from the stream bank to prevent the discharge of turbid water into any wetland stream or river. The pump discharge must be directed against a solid object (concrete slab, stone, or steel container), or other effective method to prevent erosion by dissipating energy.

APPENDIX B

SEEP SPECIFICATIONS

REQUIREMENTS FOR THE DEVELOPMENT OF SITE ENGINEERING AND ENVIRONMENTAL PLAN COMPLIANCE FILINGS FOR THE BARON WINDS PROJECT (CASE NO. 15-F-0122)

Reference 16 NYCRR Section 1002.3

Section 1002.3 of Title 16 of the Official Compilation of Codes, Rules and Regulations of the State of New York indicates compliance filing procedures and requires that compliance filings provide:

(a) A description of and citation to the requirement in a certificate or an order for which compliance is to be demonstrated;

(b) A description of how the applicant will comply with the requirements of the certificate or order; and

(c) Final maps, plans, diagrams, drawings, studies, reports or other documents demonstrating compliance.

Section A of the following Site Engineering and Environmental Plan (SEEP) specifications addresses the minimum requirements for development of facility final engineering details; site plans for construction, restoration, and environmental control measures applicable; plan and profile drawings of the development site and all Facility components; and maps of facilities sites and the overall facilities settings as appropriate to demonstrate compliance with applicable regulations and conditions of a Certificate of Environmental Compatibility and Public Need.

Section B addresses the description and statement of objectives, techniques, procedures, and requirements, i.e. the narrative portion of the SEEP compliance filings. In this portion, the filing requirements of §1002.3 will be addressed. Chapters or sections of the document shall identify whether it is addressing a specific certificate condition. If any particular requirement of these specifications is not applicable, so indicate and briefly explain.

A. SEEP COMPLIANCE FILING: SITE PLAN AND PROFILE DRAWINGS AND MAPS

Plan sheets will be submitted showing the site and details of facility location and design for all components of the Facility, including, as applicable: linear facilities such as electric collection lines, transmission lines and associated access roads, communications lines, fuel gas lines, water and

wastewater or sewer interconnection lines; and all temporary and permanent access roads. Plans shall also indicate sites of all major structures, features and buildings including, as applicable, generation sites, wind turbines, permanent meteorological towers, substations, switchyards and point-of-interconnection locations, associated access roads and the limits of disturbance for work areas associated with any component of the Facility. The Compliance Filing shall include plan-view drawings or photo-strip maps, and illustrations including but not limited to all of the following information:

1. Plan and Profile Details

Wind Turbines and Related Non-Linear Components:

The documents required by this section may be submitted either as a single plan set or in a series of packages addressing specific aspects of the Project. For all proposed wind turbine models and other Facility components, excluding linear facilities, the Certificate Holder shall provide site plans, profiles, and detail drawings, profiles, and site plans (scale minimum 1 inch = 200 feet)[1] showing:

a. A copy of the American Land Title Association (ALTA) survey showing locations of existing utility infrastructure.
b. Details and specifications of the selected turbine model(s), including cut sheets and blade details such as length and thickness.
c. Foundation drawings including plan, elevation, and section details for each foundation type proposed; if multiple foundation designs are to be utilized for a Project, the foundation type at each turbine location shall be specified on site plans; applicable criteria regarding foundation design shall be listed and described in the drawings and details.
d. Description of the wind turbine blade installation process will be included as a general note on the site plans, identifying the anticipated installation method for each wind turbine and indicating which wind turbine site locations will require the use of the entire rotor laydown area.
e. Details showing limits of clearing, temporary and permanent grading, and laydown space required for wind turbine installation; details of the Storm Water Pollution Prevention Plan (SWPPP) should be indicated.

[1] Contour lines at appropriate scale are desirable on the plan view or photostrip map if they can be added without obscuring the required information.

f. The location and boundaries of any areas proposed to be used for fabrication, designated equipment parking, staging, access, lay-down, conductor pulling and splicing; concrete batch plant or other materials preparation or processing sites; operations and maintenance buildings, yards and equipment storage areas. Indicate any planned fencing, surface improvements or screening of storage and staging areas. Demonstrate setback distances appropriate to facility design; and conformance with applicable requirements of the Certificate or local requirements.

g. If an on-site concrete batch plant will be utilized during construction, the Certificate Holder shall provide the following:

    i. final details and site plan of the concrete batch plant location, access, and layout, at a reasonable scale to show all components (including, as applicable, conveyor layout, equipment, tanks, drainage system, settlement, catchment pits, flush systems, and stockpile areas) and proximity of its location to other Facility components and existing features;

    ii. final layouts showing all proposed components of the concrete batch plant drainage system, including an indication of potential water flow direction to any proposed catchment pits, etc.;

    iii. temporary lighting that avoids offsite light trespass; and

    iv. a plan outlining the Certificate Holder's monitoring and testing of concrete procedures in conformance with the Building Code of New York State, ACI, ASTM, and any other applicable specifications.

h. The locations or description of locations for concrete chute washout and any other cleaning activities (e.g., equipment cleaning for control of invasive species).

i. Maps showing the location selected for the operations and maintenance (O&M) building. If an existing building is not utilized, prior to construction of the O&M building, the Certificate Holder shall provide the final O&M building details and construction drawings. Plans for the O&M building property shall indicate: zoning designation; compliance with use and area requirements, and setbacks to property lines; access, employee parking, building details, exterior lighting details; any outdoor storage areas, fencing and signage; water source and sewage disposal facilities; and related site development information.

Linear Facility Components:

The documents required by this section may be submitted either as a single plan set or in a series of packages addressing specific types of components (electric transmission lines, collection or distribution lines, access roads, etc.). For all linear facility components including: electric transmission lines, electric collection or distribution lines, and access roads, site plan and profile figures shall include profile drawings of facility centerline; for electric lines (whether above ground or underground) plans shall include the Line[2] Profile (at an appropriate scale) and plan drawings (scale minimum 1 inch = 200 feet) showing:

j. *Collection System Circuits Map* for the collection substation and collection line circuits' configuration and location, indicating locations of all overhead and underground installations and the number of required circuits per circuit-run.

k. Final design and details of single and multiple electric circuit underground collection lines. Each Project circuit layout (single, double, triple, etc.) shall include a cross-section and clearing and ROW widths needed for accommodating circuit installations.

l. Final details of single and multiple-circuit overhead 34.5 kV electric collection line layouts. Each Project circuit layout (single, double, triple, etc.) shall include typicals for all overhead structures, proposed guying, and associated clearing.

m. The boundaries of any new, existing, and/or expanded utility right-of-way or access road boundaries, and where linear facility lines or cables are to be constructed overhead or underground; plus, any areas contiguous to the facility site or street within which the Certificate Holder will obtain additional rights.

[2] The lowest conductor of an overhead electric transmission, collection or distribution facility design shall be shown in relation to ground elevation at the maximum permissible conductor temperature for which the line is designed to operate, i.e., normally the short-time emergency loading temperature specified by the New York ISO. If a lesser conductor temperature is used for the line profile, the maximum sag increase between the conductor temperature and the maximum conductor temperature shall be indicated for each ruling span. For underground Project design, show relation of Project to final surface grade, indicating design depth-of-cover.

n. If aboveground collection lines are installed, the location of each Facility structure (showing its height, material, finish and color, and type), structural foundation type (e.g., concrete, direct bury) and dimensions, fence, gate, down-guy anchor, and any counterpoise required for the Facility (typical counterpoise drawings will suffice recognizing that before field testing of installed structures the Certificate Holder may be unable to determine the specific location of all required counterpoise), conductors, insulators, splices, and static wires and other components attached to Facility structures.

o. Each permanent and temporary facility site access road will be identified by a unique name designation. Each access road will be shown on a scaled drawing indicating the width used during construction and the proposed width post-construction on the restoration plan. Temporary and permanent cut and fill contours for each road shall also be shown at two-foot contours. Access controls such as gates shall be indicated, with typical or specific design indicated as applicable to individual sites. Provisions for upgrading to any existing access roads should also be indicated.

p. Existing utility and non-utility structures on or adjoining the Facility site, indicating those to be removed or relocated (include circuit arrangements where new structures will accommodate existing circuits, indicate methods of removal of existing facilities, and show the new locations, types and configurations of relocated facilities). Depict each Facility conductor's clearance from the nearest overhead electric transmission or distribution lines and communications lines.

q. Existing underground utility or non-utility structures including but not limited to gas, water, telecommunication or electric cable, pipeline or other significant structures. Existing fence lines; roads; railways; airfields; property lines; hedgerows; fresh surface waters; wetlands; other water bodies; significant habitats; associated facilities; water springs; nearby buildings; water wells; or structures; major antennas (e.g. telecommunication towers); oil or gas wells, pipeline facilities, and compressor and pressure-limiting and regulating stations. Regarding co-location and crossing of existing utilities by Project components, the following additional information shall be provided:

    i. Results of any necessary cathodic protection impact studies;

    ii. Documentation, including, utility owner technical and safety requirements and copies of all relevant technical and safety manuals for each existing utility that will be co-located with or that will be crossed by proposed Project components (including Project construction equipment crossings of other utilities) and either a statement

from the existing utility owner confirming that the relevant requirements have been met, to the extent one can be obtained, or other evidence showing compliance with those requirements. Approvals or other evidence showing compliance with the relevant utility requirements shall be provided for each co-location and crossing of existing utility location;

iii. Details of existing utility owner approved Project component crossing plans showing methods, separation of existing utility and Project components, cover, installation of protection measures, and workspace, including any bore pits or similar features;

iv. Details of existing utility owner approved Project component co-location installations showing separation distances of existing utilities and Project components and any required or recommended protection measures; and

v. Details and descriptions of existing utility owner approved methods regarding Project construction equipment crossing of existing utilities.

r. Site plan and architectural configuration of any proposed Facility components, generator sites, collection station, control building, new or expanded switching station, substation, or other terminal or associated utility or non-utility structure (attach plan[3] - plot, grading, drainage, and electrical - and elevation views with architectural details at appropriate scales). Indicate the type of outdoor lighting, including design features to avoid off-site illumination and minimize glare; the color and finish of all structures; the locations of temporary or permanent access roads, parking areas, construction area limit lines, property lines, designated floodways and flood-hazard area limits, buildings, sheds, relocated structures, and details of any plans for water service and sewage and waste disposal.

2. Stormwater Pollution Prevention

The Compliance Filing plan drawings will include the SWPPP plans and drawing prepared in conjunction with the Certificate Holder's Notice of Intent (NOI) submitted to the New York State Department of Environmental Conservation (NYSDEC) to obtain coverage under the SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-15-002). These plans and drawings will indicate the locations and details of soil erosion and sediment control measures and any proposed permanent stormwater management controls developed in accordance with the

[3] 1" = 50' scale with 2-foot contour lines.

latest version of the New York Standards and Specifications for Erosion and Sediment Control (e.g., stabilized construction entrances, drainage ditches, silt fences, check dams, and sediment traps). If applicable, MS4 approval will be obtained.

3. Vegetation Clearing and Disposal Methods

Identify the following information on plan and profile drawings submitted as part of SEEP or equivalent documents or as part of a separate tree clearing plan:

a. the locations of sites requiring trimming or clearing of vegetation including both above and below ground (i.e., stumps) and the geographic limits of such trimming or clearing;
b. the specific type and manner of cutting, disposition or disposal method for vegetation (e.g., chip; cut and pile; salvage merchantable timber, etc.);
c. the disposal locations of all vegetation (including stumps) to be cut or removed from each site;
d. any geographical area bounded by distinctly different cover types requiring different cut-vegetation management methods due to site conditions such as land use differences, population density, habitat or site protection, soil or terrain conditions, fire hazards, avoidance of damage to specimen tree stands or desirable species, important screening trees, hedgerows, or other factors;
e. site specific vegetation treatment or disposal methods, including any property-owner required details such as log storage or wood chip piling areas, or “no-herbicide” zones; and
f. areas requiring “danger tree” removal.

4. Building and Structure Removal

Indicate the locations of any buildings or structures to be acquired, demolished, moved, or removed. Provide plans for site access; and plans and standards for control of dust, runoff and containment of any debris or other waste materials related to removals.

5. Waterbodies

a. Indicate the name, water quality classification and location of all rivers and streams, (whether perennial and intermittent) and drainages within the construction area or crossed by any proposed linear facility site or access road constructed, improved or maintained for the Facility. On the plan and profile drawings, indicate:

i. stream crossing method and delineate any designated streamside “protective or buffer zone” in which construction activities will be restricted to the extent necessary to minimize impacts on rivers and streams;
ii. the activities to be restricted in such zones; and,
iii. identify any designated floodways or flood hazard areas within the Facility site, or other areas used for Facility construction or the site of associated facilities. Provide topographic and flood hazard area elevations (if determined by engineering study); and specifications for facilities to be located within designated flood hazard or floodway zones; and design engineering and construction measures to demonstrate conformance with local ordinances, avoid damage to facilities, or avoid increasing flood elevation at any other location due to facility installation and operation.

b. Show the location of all potable water sources, including springs and wells on or within 100 feet of Facility construction, indicating on a site-by-site basis, precautionary measures to be taken to protect each water source.

6. <u>Wetlands</u>

a. All Federal and State regulated wetlands and wetland 100-foot adjacent areas (“adjacent areas”) located within the construction area or crossed by or adjacent to any access road to be constructed, improved or used for the Facility shall be depicted on plan drawings. Each wetland will be identified by a project identification number and by the NYSDEC designation as appropriate.
b. Indicate the location and type (i.e., identification code for regulated town, state, or federal wetlands) of any wetland identified per 6 a. above.
c. Indicate type and location of measures (e.g., mats) to be taken to protect all wetlands, associated drainage patterns and wetland functions.

7. <u>Land Uses</u>

a. Agricultural Areas:
    i. Indicate the locations of sites under cultivation or in active agricultural use including rotational pasture, pasture, hayland, and cropland. Designations and descriptions will be those in current use by the New York State Department of Agriculture and Markets (NYSDAM).

ii. Indicate the location of any unique agricultural lands including maple sugarbush sites, organic muckland, and permanent irrigation systems, as well as areas used to produce specialty crops such as vegetables, berries, apples, or grapes.

iii. Indicate the location of vulnerable soils in agricultural areas that are more sensitive than other agricultural soils to construction disturbance due to factors such as slope, soil wetness, or shallow depth to bedrock.

iv. indicate the location of all land and water management features including subsurface drainage, surface drainage, diversion terraces, buried water lines, and water supplies.

v. Designate the site-specific techniques to be implemented to minimize or avoid construction-related impacts to agricultural resources.

b. Sensitive Land Uses and Resources:

Identify and indicate the location of sensitive land uses and resources that are located adjacent to Project construction areas that may be affected by construction or maintenance of the Facility.

c. Geologic, Historic, and Scenic or Park Resources:

Indicate the locations of nearby geologic, historic, and existing or planned scenic or park resources located adjacent to Project construction areas and specify measures to minimize impacts to these resources (e.g., specified setback distances, vegetation protection, fencing, signs).

d. Recreational Areas:

Indicate the locations where existing or planned recreational use areas, designated trails, trailhead parking areas or associated driveways located on or adjacent to Project construction areas would affect or be affected by the Facility construction,

8. <u>Lay-down Areas and Workpads</u>

a. Indicate the locations of temporary and permanent lay-down areas and workpads.

b. Provide construction type, material, and dimensions and their associated limits of disturbances.

9. Noise-Sensitive Sites

Show the locations of noise-sensitive areas subject to mitigation. Identify locations and specifications of measures to mitigate construction noise as required by the Certificate of Environmental Compatibility and Public Need (Certificate).

10. Ecologically and Environmentally Sensitive Areas

a. Indicate the general locations of any known ecologically and environmentally sensitive sites (e.g., archaeological sites; rare, threatened, and endangered species or habitats; agricultural districts; and special flood hazard areas), adjacent to the Facility or within 100 feet of any access roads to be constructed, improved or maintained for the Facility. Specify the measures that will be taken to protect these resources (e.g., fencing, flagging, signs "Sensitive Environmental Areas, No Access").
b. Measures for avoidance of archaeological sites identified within the Facility site shall be indicated on the final site plans. The mapped locations of all identified archaeological sites within 100 feet of the proposed Facility shall be identified as "Environmentally Sensitive Areas" or similar on the final Facility construction drawings, and areas within, or directly adjacent to, Project disturbance areas will be marked in the field by construction fencing with signs that restrict access.

11. Invasive Species of Special Concern

Identify the location(s) of Invasive Species of Special Concern (based on the site invasive species survey as required by the Certificate) and the prescribed method to control the spread of the identified species on the site during construction.

12. Vegetation Controls and Herbicides

Indicate areas where herbicides will be used, and prescribed treatment methods for specific vegetation control, on the site plans and construction drawings.

B. DESCRIPTION AND STATEMENT OF OBJECTIVES, TECHNIQUES, PROCEDURES AND REQUIREMENTS

The narrative portion of the SEEP Compliance filing(s) for the Facility shall include, but need not be limited to, all of the following information:

1. Facility Location and Description

Describe the location and limits of the Facility and explain the need for any additional rights. For each wind turbine structure type, provide manufacturer's specifications applicable to final design of the Facility. For each facility structure type, indicate the GSA—595A Federal standard color designation or manufacturer's color specification to be used for painted structures. State any objections raised by Federal, State or local transportation (highways, waterways, or aviation) officials to the final location or manner of installation of, or access to, the certified Facility site(s).

2. Stormwater Pollution Prevention

a. The acknowledged SWPPP and any MS-4 review.

b. In any areas of coastal erosion hazard, include plans to demonstrate compliance with the standards for coastal erosion hazard protection as required by 6 NYCRR Part 505 - Coastal Erosion Management.

c. In locations where electric collection lines and transmission lines will be installed by open trenching, particularly along or across areas of steep slopes, describe measures to address temporary (including stormwater events with open trench) and permanent (including "piping" erosion after backfilling of the trench for the life of the facility) erosion. Related subsurface drainage to relieve hydraulic pressure behind trench plugs or breakers for the life of the facility should also be addressed.

The following measures to address in-trench erosion are recommended:

i. Trench Plugs:

Temporary trench plugs will be placed in the excavated trench to impede the flow of water down the trench. Hard plugs (unexcavated earth segments of the ditch line) will be maintained adjacent to streams and wetlands to protect those resources until cable installation activities occur. Soft plugs (replaced trench spoil, fill, sandbags) will be spaced in the trench in sloping areas to reduce erosion and trench slumping. Hay or straw bales will not be used as material for temporary trench plugs.

After cable installation, permanent sandbag or alternative trench breakers will be installed and spaced according to Appendix 1 “Trench Breaker Spacing” before backfilling.

At the request of landowners or at the discretion of the environmental inspector or construction supervisor, un-disturbed areas (“hard plugs”) will be left in place until cable installation commences, to accommodate equipment crossings. Hard plugs should be a minimum of 50 feet in length for areas where cable splices will occur. For animal and vehicle crossings of the trenchline area, a plug 25 to 30 feet in length should suffice.

ii. Trench Breakers:

Trench breakers may be constructed of sandbags or alternative materials. Impervious materials may be used to retain water in the wetlands. Trench breakers should be installed at all wetland edges. The location of these impervious trench breakers will be determined in the field based on locations identified in the construction plan documents. Trench breakers should also be installed at the top of bank of each waterbody crossing.

iii. Backfill:

Backfill operations will commence immediately after cable installation operations and will continue until completed. When backfilling the trench, the following will apply:

(a) Only on-site, native material should be used in backfill operations unless the native material does not meet specifications, or ledge rock is encountered in the trench. Imported material may be brought in to protect the cables and achieve depth-of-cover requirements. Imported backfill must be free of invasive species pursuant to an Invasive Species Control Plan.

(b) Where topsoil has been segregated from trench spoil, backfill will be done in reverse order with trench spoil returned first.

(c) Excess spoil will be removed. Under no circumstances will excess spoil be spread along the ROW or stockpiled in a manner that permanently changes the soil profile.

(d) Trench breakers made of foam, sandbags, or other impervious materials shall be installed at the edge of all wetlands. For those areas where conditions and topography warrant, and the Certificate Holder identifies prior to the start of

construction, the installation of trench breakers at the upland/wetland boundaries is appropriate to minimize changes to hydrologic regime in the wetlands such as drainage from the wetland.

3. Vegetation Clearing and Disposal Methods

a. Describe the specific methods and rationale for the type and manner of cutting, stockpiling, and disposition and/or disposal of cut vegetation.
b. Detail specific measures employed to avoid damage to: specimen tree stands of desirable vegetation; threatened and endangered species and significant habitat areas; important screening trees and hedgerows. Provide additional site-specific plan details as-needed to demonstrate work-area limits and protection measures that will be applied during construction and maintenance of the Facility.
c. Provide vegetation specifications and resource protection measures associated with vegetation removal during site clearing or reference where this information is included in the SWPPP for the Project.
d. Indicate specifications and standards applicable to salvage, stockpiling or removal of material.
e. Identify ownership of cleared vegetation (i.e., timber) based on landowner agreements (as applicable) and describe methods for salvaging timber.
f. Describe methods of compliance with 6 NYCRR Part 192 – Forest Insect and Disease Control, any applicable NYSDEC quarantine orders, and NYSDAM regulations.

4. Building and Structure Removal

Indicate the locations of any buildings or structures to be acquired, demolished, moved, or removed. Provide the rationale for the acquisition and removal of buildings or structures. Provide copies of approvals, demolition permits needed, control measures and standards for restoration, handling of hazardous or flammable materials, and environmental controls.

5. Waterbodies

a. Describe the measures to be taken to protect stream bank stability, stream habitat, and water quality including, but not limited to: crossing technique; crossing structure type; timing restrictions for in-stream work; stream bed and bank restoration measures; vegetation

restoration measures; and other site-specific measures to minimize impacts, protect resources, and manage Facility construction.

b. Indicate the procedures that were followed to inventory such resources and provide copies of any resulting data sheets and summary reports.

c. Provide a table listing all waterbodies located within, or within 500 feet of, the construction area and include: Town (location), facility site location (site plan and profile drawing sheet number and reference location); Stream Name, Field/Map Identification Name, Perennial or Intermittent, New York Stream Classification, Water Index Number, Fishery Type, specific construction activities or crossing method specifying the distance of crossing across or to the Facility construction area; and GPS coordinates.

6. <u>Wetlands</u>

a. For each State-regulated wetland and federal §404 wetland within or adjacent to the Facility construction area, provide a table to indicate the following: town (location); Facility Site location (site plan and profile drawing sheet number and reference location; wetland field designation; NYSDEC classification code; wetland type; total area of temporary disturbance/impact; total area of permanent disturbance (sq. ft.); by Facility (sq. ft.) and the nature of the said disturbance; and conversion of State-regulated forested wetlands (sq. ft.).

b. Describe all activities that will occur within State-regulated wetlands and federal §404 wetlands. For each State-regulated wetland or associated adjacent area(s), indicate the type of activity (e.g., construction, filling, grading, vegetation clearing, and excavation) and summarize how the activity is consistent with the weighing standards set forth in 6 NYCRR 663.5(e) and (f). Describe how impacts to wetlands, adjacent areas, associated drainage patterns and wetland functions will be avoided, and how impacts will be minimized. For federal §404 wetlands provide individual or nationwide permits, application material (if federal permit has not been issued), with a discussion of the site-specific avoidance and minimization measures used to protect wetlands.

c. If the proposed Project wetland impacts require compensatory mitigation, provide a copy of the final Wetlands Mitigation Plan, developed in coordination with NYSDEC, NYSDPS Staff, and USACE, addressing permanent impacts to federal and State-regulated wetlands.

7. Horizontal Directional Drilling

Provide a final Inadvertent Return Plan that assesses potential impacts from frac-outs associated with horizontal directional drilling (HDD) that includes the following. Note that the locations where HDD is proposed will be shown on the construction plans for the Project.

a. Biodegradable drilling solutions shall be used to the extent practicable to minimize harm to aquatic species in the event of a drilling frac-out.
b. To the extent practicable, exit and entry points shall be located a minimum of 20 feet from the edge of the stream or wetland to minimize disturbance.
c. All equipment and provisions of the plan shall be readily accessible at the locations where HDD technology is used during construction.
d. If inadvertent drilling fluid surface returns occur in wetlands or streams, the NYSDEC and NYSDPS Staff shall be notified immediately and a written report describing the location, estimated volume, and cleanup efforts shall be submitted within 24 hours of the occurrence.

8. Land Uses

a. Agricultural Areas:
    i. Describe programs, policies, and procedures to mitigate agricultural impacts such as soil compaction. Explain how construction plans either avoid or minimize crop production losses and impacts to vulnerable soils. Provide standards for exclusion of livestock grazing from Facility Site until appropriate site stabilization and restoration have been demonstrated.
    ii. Indicate specific techniques and references to appropriate agricultural protection measures recommended by NYSDAM.
b. Sensitive Land Uses:

    Describe the sensitive land uses (e.g., hospitals, emergency services, sanctuaries, schools, residential areas, as applicable to Facility Site) that may be affected by construction of the Facility and associated sites, or by construction-related traffic, and specify measures to minimize the impacts on these land uses.

c. Geologic, Historic and Scenic or Park Resources:

    Describe the geologic, historic, and scenic or park resources identified in the application that are located within or adjacent to the Project limits of disturbance and specify measures to minimize impacts on these resources. Indicate the procedures that were followed to identify such resources and specify the measures that will be taken to protect or preserve these

resources. Reports prepared to identify and analyze such sites shall be made available to Staff upon request.

d. Recreation Areas:

Explain how proposed or existing recreation areas located within or adjacent to Project limits of disturbance will be avoided or accommodated during construction, operation, and maintenance of the Facility.

9. <u>Access Roads, Lay-down Areas and Workpads</u>

a. Identify all access routes to and within the Facility Site, including the areas where temporary or permanent access is required; describe the nature of access improvements based on natural features, equipment constraints, and vehicles to be used for construction and maintenance, and the duration of access needs through restoration and the maintenance of the Facility.

b. Discuss the types of access roads or paths that will be used and the rationale for employing that type of access including consideration of:

   i. temporary installations (e.g., corduroy, mat, fill, earthen road, geotextile underlayment, gravel surface, etc.);

   ii. permanent installations (e.g., cut and fill earthen road, geotextile under-layment, gravel surface, paved surface, etc.);

   iii. use of existing roads, driveways, farm lanes, rail beds, etc.; and,

   iv. other access, e.g., helicopter or barge placement.

c. For each temporary and permanent access type, provide a figure or diagram showing a typical installation (include plan view, cross section and side view with appropriate distances and dimension and identification of material). Where existing access ways will be used, indicate provisions for upgrading for Facility construction. Demonstrate accommodation of planned or proposed future access to sites and lands within or adjacent to the facilities locations and landowner requested improvements (e.g., access roads across linear facilities such as wires, pipes, or conduits).

d. Indicate the associated drainage and erosion control features to be used for access road construction and maintenance. Provide re-vegetation materials specifications. Provide diagrams and specifications (include plan and side views with appropriate typical dimensions) for each erosion control feature to be used, such as:

   i. check dam (for ditches or stabilization of topsoil);

ii. broad-based dip or berm (for water diversion across the access road);
iii. roadside ditch with turnout and sediment trap;
iv. French drain;
v. diversion ditch (water bar);
vi. culvert (including headwalls, aprons, etc.);
vii. sediment retention basin (for diverting out-fall of culvert or side ditch); and,
viii. silt fencing.

e. Indicate the type(s) of stream crossing method(s) to be used in conjunction with temporary and permanent access road construction. Provide diagrams and specifications (include plan and side view with appropriate dimensions) for each crossing device and rationale for their use. Stream crossing methods and design may include but not be limited to:
   i. timber mat;
   ii. culverts including headwalls;
   iii. bridges (either temporary or permanent); and,
   iv. fords.
f. All diagrams and specifications should include material type and size to be placed in streams and on stream approaches.
g. If access and workpad areas cannot be limited to upland areas, provide justification for any access and workpad areas which are proposed to be located in a wetland or stream or waterbody.
h. Provide a traffic control plan that identifies the delivery route(s) for oversize or over-length equipment or materials and the route(s) for delivery of earthen materials and concrete. The plan shall describe the delivery of materials to the Facility Site. This plan will demonstrate that all municipalities, NYS Department of Transportation, NYS State Police Barracks, County Department of Public Works, County Sheriffs and local police department have been contacted. The plan shall identify weight limited bridges in the area to be avoided. The plan shall indicate mitigation measures to manage traffic during construction and operation. Copies of all permits associated with the delivery of such equipment and materials shall be provided.

10. Noise Issues

Specify procedures to be followed to minimize noise impacts related to facility site clearing, construction, and operation of the Facility. Indicate the types of major equipment to be used in construction and Facility operation; sound levels at which that equipment operates; days of the week and hours of the day during which that equipment will normally be operated; any exceptions to these schedules; and any measures to be taken to reduce audible noise levels caused by either construction equipment or Facility operation.

11. Ecologically and Environmentally Sensitive Sites

a. Indicate the procedures that were followed to identify any known ecologically and environmentally sensitive resources (e.g., archaeological sites; rare, threatened, and endangered species (RTE) or habitats; agricultural districts; and special flood hazard areas) adjacent to the Facility or within 100 feet of any access roads to be constructed, improved or maintained for the Facility, and specify the measures that will be taken to protect or preserve these resources. Reports prepared to identify and analyze sites involving RTE shall be marked confidential and submitted for confidential handling.

b. Provide a Final Unanticipated Discovery Plan, establishing procedures to be implemented in the event that resources of cultural, historical, or archaeological importance are encountered during Facility construction. The plan will include a provision for immediate work stoppage upon the discovery of possible archaeological or human remains. Evaluation of such discoveries, if warranted, shall be conducted by a professional archaeologist, qualified according to New York Archaeological Council Standards. Work shall not resume in the area of such remains until written permission is received from the New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP).

c. If complete avoidance of archaeological sites is not possible, the Certificate Holder shall consult with the NYSOPRHP and NYSDPS Staff to determine if Phase II investigations or mitigation is warranted. The results of any Phase II investigations and/or identification of proposed mitigation measures will be filed as an attachment to the applicable SEEP filings.

12. Invasive Species of Special Concern

Provide an *Invasive Species Prevention and Management Plan (ISPMP),* prepared in consultation with NYSDPS, NYSDEC and NYSDAM, based on the pre-construction invasive species survey of

invasive species within the Project area.

a. The ISPMP shall include measures that will be implemented to minimize the introduction of Invasive Species of Special Concern and control the spread of existing invasive species of special concern during construction (e.g., soil disturbance, vegetation clearing, transportation of materials and equipment, and landscaping/re-vegetation).
b. Control measures shall include construction materials inspection and sanitation, invasive species treatment and removal, and site restoration.
c. A post-construction monitoring program (MP) shall be conducted consistent with the applicable Certificate Condition following completion of construction and restoration. The MP shall collect information to facilitate evaluation of ISPMP effectiveness.
d. At the conclusion of the MP, a report that assesses how effective the ISPMP was during construction shall be submitted to NYSDPS, NYSDAM, and NYSDEC, and filed with the Secretary, that assesses how effective the IPSMP was during construction.
e. In the event that the report concludes that IPSMP goals have not been met, the Certificate Holder shall meet with NYSDPS Staff, NYSDAM, and NYSDEC to consider why initial control measures were ineffective and the probability of successful additional treatment measures without the need for perpetual treatments.

13. Herbicides

Include a facility vegetation management and herbicide use plan for all vegetation management during construction and operation that:

a. Specifies the locations where herbicides are to be applied. Provide a general discussion of the site conditions (e.g., land use, target and non-target vegetation species composition, height and density) and the choice of herbicide, formulation, application method and timing.
b. Provides lists of desirable and undesirable vegetation species.
c. Describes the procedures that will be followed during chemical application to protect non-target vegetation, streams, wetlands, potable waters and other water bodies, and residential areas and recreational users on or near the ROW.

14. Fugitive Dust Control

Specify appropriate measures that will be used to minimize fugitive dust and airborne debris from construction activity.

15. Petroleum and Chemical Handling Procedures

Provide a final *Spill Prevention, Control and Countermeasures (SPCC) Plan* to minimize the potential for unintended releases of petroleum and other hazardous chemicals during Facility construction and operation. The SPCC Plan shall be applied to all relevant construction activities and address the following:

a. Information about water bodies, procedures for loading and unloading of oil, discharge or drainage controls, procedures in the event of discharge discovery, a discharge response procedure, a list of spill response equipment to be maintained on-site (including a fire extinguisher, shovel, tank patch kit, and oil-absorbent materials), methods of disposal of contaminated materials in the event of a discharge, and spill reporting information. Any spills shall be reported in accordance with State and/or federal regulations.
b. Storage, handling, transportation, and disposal of petroleum, fuels, oil, chemicals, hazardous substances, and other potentially harmful substances which may be used during, or in connection with, the construction, operation, or maintenance of the Facility.
c. Avoiding spills and improper storage or application in the vicinity of any wetland, river, creek, stream, lake, reservoir, spring, well, or other ecologically sensitive site, or existing recreational area along the ROW and access roads.
d. Reporting, responding to and remediating the effects of any spill of petroleum, fuels, oil, chemicals, hazardous substances, and other potentially harmful substances in accordance with applicable State and Federal laws, regulations, and guidance, and include proposed methods of handling spills of petroleum, fuels, oil, chemicals, hazardous substances, and other potentially harmful substances which may be stored or utilized during the construction and site restoration, operation, and maintenance of the Facility.

16. Health, Safety, and Security

Copies of the following final plans shall be submitted as compliance filing(s):

a. The *Emergency Action Plan* that shall be implemented during Facility construction, operation, and decommissioning. Copies of the final plan shall be provided to NYSDPS Staff, the NYS Division of Homeland Security and Emergency Services, and local emergency responders that serve the Facility.
b. The *Site Security Plan* for Facility Construction and Operations. Copies of the final plan shall be provided to NYSDPS Staff, NYS Division of Homeland Security and Emergency

Services and local emergency responders that serve the Facility. The plan shall include, but not be limited to, the following:

i. Posting signs at all edges of the ROW in those locations where the collection lines intersect public roads;
ii. working with local law enforcement officials in an effort to prevent trespassing;
iii. identifying construction and material details of gates and berms; and
iv. identifying existing and proposed gate locations on the Plan and Profile drawings.

Final determination of locations of gates and berms shall be made during a post-construction assessment of the Project, in consultation with NYSDPS Staff.

c. The *Health and Safety Plan* that shall be implemented during Facility construction, operation, and decommissioning.
d. A *Quality Assurance and Quality Control Plan(s)* (QA/QC Plan(s)), to be developed in coordination with the selected contractor(s).

17. Environmental Monitoring Plan

Provide an Environmental Monitoring Plan that contains the following:

a. Describe protocols for supervising Facility construction activities to ensure minimization of environmental impact and compliance with the environmental protection provisions specified by the Certificate.
b. Titles and qualifications of personnel proposed to be responsible for ensuring minimization of environmental impact throughout the demolition, clearing, construction and restoration phases, and for enforcing compliance with environmental protection provisions of the Certificate and the compliance filings.
c. Specify responsibilities for personnel monitoring all construction activities, such as clearing, sensitive resource protection, site compliance, change notices, etc.
d. Explain how all environmental protection provisions will be incorporated into contractual specifications and communicated to those employees or contractors engaged in demolition, clearing, construction, and restoration.
e. Describe the procedures to “stop work” in the event of a Certificate violation.
f. Identify the company’s designated contact including 24/7 emergency phone number, for assuring overall compliance with Certificate conditions.

18. Clean-up and Restoration

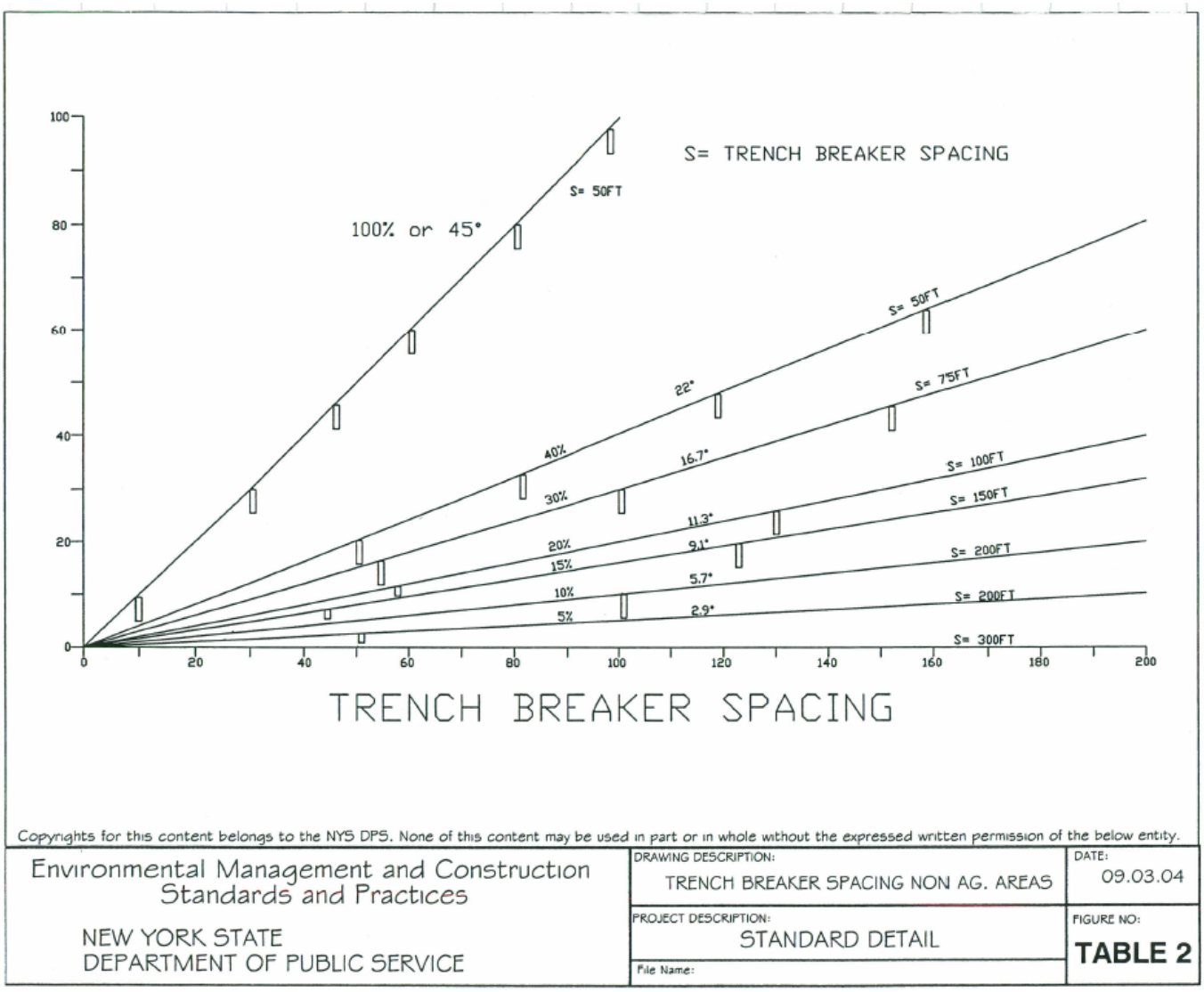
Describe the Certificate Holder's program for clean-up and restoration, including:

a. the removal and restoration of any temporary roads, lay-down or staging areas; the finish grading of any scarified or rutted areas; the removal of waste (e.g., excess concrete), scrap metals, surplus or extraneous materials or equipment used; and
b. plans, standards and a schedule for the restoration of vegetative cover, including but not limited to, specifications indicating:
    i. design standards for ground cover, including:
        (a) species mixes and application rates by site;
        (b) site preparation requirements (soil amendments, stone removal, subsoil treatment, or drainage measures); and
        (c) acceptable final cover percent by cover type;
    ii. planting installation specifications and follow-up responsibilities;
    iii. a schedule or projected dates of any seeding and/or planting; and,
    iv. plans to prevent unauthorized access to and along the Facility site.

19. Visual Impact Mitigation

Provide landscape plan for the O&M building. The use of landscaping to mitigate visual impacts relating to shadow flicker and cultural resources will be addressed in the respective mitigation plans.

Appendix 1 - Trench Breaker Spacing



Environmental Management and Construction Standards and Practices NEW YORK STATE DEPARTMENT OF PUBLIC SERVICE	DRAWING DESCRIPTION: TRENCH BREAKER SPACING NON AG. AREAS	DATE: 09.03.04
	PROJECT DESCRIPTION: STANDARD DETAIL File Name:	FIGURE NO: **TABLE 2**