

PRELIMINARY SCOPING STATEMENT

Eight Point Wind Energy Center

Steuben County, New York

Towns of Greenwood, Troupsburg, and West Union

Case No.: 16 – F-0062

Prepared for:



**Eight Point Wind, LLC
700 Universe Boulevard
Juno Beach, Florida 33408
Contact: David Gil
David.gil@nee.com
Office: (561) 304-5201
Fax: (561) 691-7307**

Prepared by:



**TRC
10 Maxwell Drive
Clifton Park, NY 12065**

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1.0 Introduction

Eight Point Wind, LLC (“Eight Point Wind” or the “Applicant”), a subsidiary of NextEra Energy Resources, LLC (NEER), plans to submit an Application to construct a major electric generating facility, the Eight Point Wind Energy Center (or the “Project”), under Article 10 of the Public Service Law (PSL). Pursuant to the rules of the New York State Board on Electric Generation Siting and the Environment (the “Siting Board”), applicants proposing to submit an application to construct a major electric generating facility must submit a Public Involvement Program (PIP) and a Preliminary Scoping Statement (PSS). The PIP must be submitted to the Department of Public Service (DPS) for review at least 150 days prior to filing a PSS. Eight Point Wind filed a PIP on January 29, 2016, and updated it on March 28, 2016. The Applicant has been implementing the PIP plan and conducting stakeholder outreach as well as required consulting with local, state, and federal agencies and Project stakeholders. Consultations have been documented in a Meeting Log maintained by the Applicant, which has been updated and submitted to the Siting Board approximately once every 45 days and is available on the Applicant’s website (www.EightPointWind.com). The most recent Meeting Log was filed with the Siting Board on October 6, 2016, and is also included with this PSS as Appendix A. The Applicant will continue to implement the PIP and conduct outreach activities throughout the scoping process, during the preparation of the Certificate Application, and throughout the remainder of the Article 10 process.

The PSS is a required pre-application procedure for major electric generating facilities applying for a Certificate of Environmental Compatibility and Public Need pursuant to Article 10 of the PSL. The purpose of the PSS is to establish the methodology, scope of studies, or program of studies to be conducted in support of an application being submitted for the Project pursuant to Article 10. The required content of the PSS is prescribed in 16 NYCRR § 1000.5.

This document represents the PSS for the Eight Point Wind Energy Project and is intended to satisfy the filing requirements set forth at 16 NYCRR § 1000.5(c). Pursuant to 16 NYCRR § 1000.5(g), within 21 days after the filing of this PSS, any person, agency, or municipality may submit comments on the application and file a copy with the Secretary. Further details for filing comments on this PSS are provided in the Notice accompanying this document. (See Appendix B for a copy of the Notice).

2.0 Applicant and Project Description

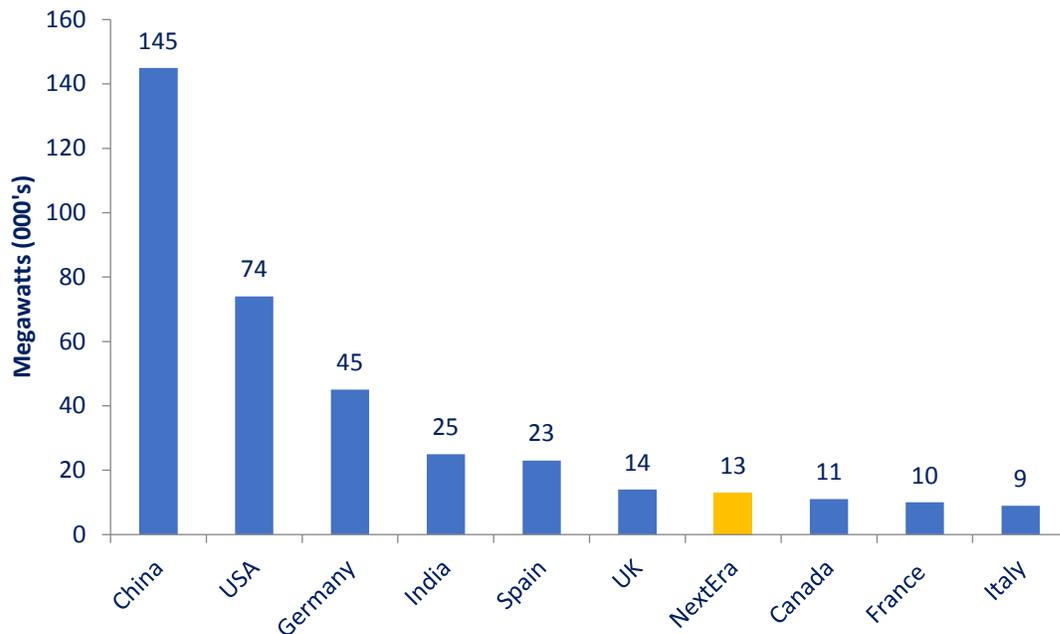
2.1 Company Profile

Eight Point Wind, LLC, a Delaware limited liability company that will develop, own, operate and maintain a wind powered wholesale generating facility in Steuben County, New York, is a wholly-owned subsidiary of NextEra Energy Resources, LLC (NEER).

NEER is a nationally recognized clean energy provider with a portfolio of facilities totaling over 20,000 megawatts (MW) of generating capacity in the United States and Canada. Approximately 95 percent of NEER's electricity is derived from clean or renewable sources, including wind and solar.

NEER is a world leader in the development, construction, and operation of wind and solar energy centers. NEER has more than twice the amount of wind capacity in operation in North America relative to its nearest competitor. In fact, NEER has more wind capacity in its portfolio than all but six countries in the world.

Table 1. Wind Capacity Comparison



Source: Global Wind Energy Council – as of December 2015. NextEra figure represents net capacity

NEER operates 110 wind farms in the United States and Canada. In addition, NEER has two operating power plants in New York. NEER's leadership in renewables furthers the federal government's policy as articulated in 42 U.S.C. § 9201 to "hasten the widespread utilization of [wind energy] systems," as well as the State of New York's newly implemented Clean Energy

Standard and other clean energy programs. The Eight Point Wind Energy Center would be compatible with these federal and state policies and renewable energy goals.

2.2 Project Description

The Eight Point Wind Energy Center will have a maximum generating capability of approximately 102 megawatts (MW) of power from an estimated 32 wind turbines located on land either leased or purchased from owners of private property located in the Towns of Greenwood, Troupsburg, and West Union in Steuben County, New York (see Figures 1 and 2). Eight Point Wind intends to construct, own, operate, and maintain all components of the Project, except for the point of interconnection (POI) location, which will be located within New York State Electric and Gas Corporation's (NYSEG) Bennett Substation in Hornellsville, New York. The Applicant has recently signed a long-term agreement to sell the Renewable Portfolio Standard ("RPS") attributes to a credit-worthy off-taker in New York.

Project facilities currently plan to include the installation of up to 32 commercial-scale wind turbines, approximately 13 miles of access roads, approximately 30 miles of buried (and some overhead due to physical constraints) electric collection lines, a Project substation, 1-2 permanent meteorological (met) towers, an operations and maintenance (O&M) building, electrical interconnection facilities, and up to three temporary construction staging areas.

The Applicant proposes to construct a Project substation and an approximately 18-mile overhead 115 kilovolt (kV) transmission line. The transmission line will interconnect to new POI facilities within NYSEG's 115kV Bennett Substation in Hornellsville, New York. Because the transmission line is greater than 100 kV and the length exceeds 10 miles, it will be permitted separately under Article VII of the New York Public Service Law (PSL). Article VII of the PSL sets forth a review process for the consideration of any application to construct and operate a Major Utility Transmission Facility, and requires an applicant to apply for a Certificate of Environmental Compatibility and Public Need ("Certificate") and meet the Article VII requirements before constructing the transmission line. Therefore, the need for, and environmental impact of, the 115 kV transmission line associated with the Eight Point Wind Energy Center will not be evaluated in detail in the Article 10 Application. Eight Point Wind anticipates that the Article VII Application will be reviewed concurrently with the Article 10 Application.

The Article VII application will be in accordance with the regulations set forth under Article VII of the PSL. Pre-application informative stakeholder meetings shall take place prior to submission as well as the publication of newspaper notices for general circulation to the areas in which a facility is proposed. The Article VII application will include line location and right-of-way, a description of the transmission facility, environmental impact studies, a statement of facility need, reasonable alternative routes and support for proposed routes, and related additional information.

The proposed Project will have positive socioeconomic impacts in the Project Area, in New York and beyond through employment opportunities, specifically by generating temporary development and construction employment. Based on similar experience elsewhere, Eight Point Wind estimates that approximately 10-20 temporary jobs are being generated during the two years of development and permitting, and 100-175 temporary construction jobs will be generated during the roughly eight months of construction. Much of the temporary construction employment will likely be drawn from Steuben County and the Southern Tier labor market. Local construction employment will primarily benefit those in the construction trades, including equipment operators, truck drivers, laborers, and electricians. Eight Point Wind encourages local hiring to the greatest extent practical and workers from outside the area who fill specialized job functions will add to the regional economy by staying in area hotels, eating in the local restaurants, and shopping in Steuben County stores.

Once operational, the Project is estimated to provide local governments with approximately \$40 million over the 30-year expected life of the Project through Payment In Lieu of Tax (PILOT) payments and/or Host Community Agreement payments then property taxes. In turn, these payments and tax money will support local schools, infrastructure, and vital services such as fire departments and other emergency response entities. In addition, lease payments to landowners are estimated to be more than \$26 million over the 30-year expected life of the Project. Additionally, Eight Point Wind, estimates that approximately six full-time permanent operations and maintenance jobs will be created to support the Project for the duration of its 30-year expected life.

2.3 Primary Proposed Project and Study Area

Figure 1 shows the regional Project Location, Figure 2 shows the Project Area and the Project Study Area to be used for analysis. For purposes of this document, Eight Point Wind is defining these areas as follows:

- The Project Area is comprised of locations being evaluated for placement of permanent Project facilities. As shown in Figure 2, the Project Area is approximately 45,500 acres of land in the Towns of Greenwood, Troupsburg, and West Union, New York. None of the Project Area is proposed to be located within the adjacent Greenwood, Rock Creek, or Turkey Ridge State Forest areas. Figure 2 also provides the study area corridor currently being evaluated, within which the 115 kV transmission line is anticipated to be located.
- The Study Area, consistent with 16 NYCRR § 1000.2(ar), encompasses all acreage within at least five miles of the currently proposed location of the Project generating facility components, interconnections, and related facilities. The Study Area includes approximately 222,799 acres of land (inclusive of the 45,500 acre Project Area).

2.4 Summary of Pre-Application Activities

Prior to this PSS, Eight Point Wind prepared a Public Involvement Program (“PIP”) plan originally filed in January 2016. This document was submitted in accordance with 16 NYCRR § 1000.4 and filed with the Siting Board. The Project was assigned Case No. 16-F-0062. Comments on the PIP submitted were received from the New York State Department of Public Service (DPS) on February 29, 2016. This document was updated, finalized, and filed on March 28, 2016. Paper copies of the PIP were provided to the following locations:

- Canisteo Town Hall, 6 South Main Street, Canisteo NY
- Greenwood Town Hall, 2696 Main Street, Greenwood, NY
- Hartsville Town Hall, 5150 Purdy Creek Road, Hornell, NY
- Hornellsville Town Hall, 4 Park Avenue, Arkport NY
- Jasper Town Hall, 3807 Preacher Road, Jasper, NY
- Troupsburg Town Hall, 873 Main Street, Troupsburg, NY
- West Union Town Hall, 3128 NYS Route 248, Rexville, NY
- Jasper Free Library, 3807 Library Street, Jasper, NY 14855
- Wimodaughasian Free Library, 19 West Main Street, Canisteo, NY 14823
- City of Hornell Public Library, 64 Genesee Street, Hornell, NY 14843

The PIP can be accessed on the DPS online case record website maintained by the Siting Board and on a Project-specific website created and maintained by Eight Point Wind (www.EightPointWind.com). The PIP is also included in this PSS as Appendix C.

According to 16 NYCRR § 1000.4(c), the PIP must, and does include:

- (1) Consultation with the affected agencies and other stakeholders;
- (2) Pre-application activities to encourage stakeholders to participate at the earliest opportunity;
- (3) Activities designed to educate the public as to the specific proposal and the Article 10 review process, including the availability of funding for municipal and local parties;
- (4) The establishment of a website to disseminate information to the public;
- (5) Notifications; and
- (6) Activities designed to encourage participation by stakeholders in the certification and compliance process.

In support of this PSS, the Applicant has consulted with the public, affected agencies and other stakeholders, as required by 16 NYCRR § 1000.5(b). Such consultations have been documented by Eight Point Wind. These meeting logs have been continually updated and submitted to the Siting Board on a regular basis. The latest update was filed with the DPS on October 6, 2016, and is included as Appendix A.

2.5 Organization of the Preliminary Scoping Statement

This PSS has been organized in accordance with 16 NYCRR § 1001, with all sub-sections directly corresponding with each Exhibit that will be included in the Application (set forth in 16 NYCRR § 1001). In order to ensure compliance with 16 NYCRR § 1000.5(l) a content matrix has been created and is included in the Summary and Conclusions section (Section 4.0) of this document. This matrix cross-references the different requirements of 16 NYCRR § 1000.5(l) with the sections applicable to this PSS.

The information presented in this PSS is preliminary in nature and presents current information on the design of the Project in its early stages of development. As the Project is advanced, the Article 10 Application will clearly depict all proposed turbine locations, along with the locations of other Project components. Final micro-siting and engineering will take place following receipt of the Certificate. The linear distances of components will be updated in the Application based on the actual footprint that will be presented and analyzed. Furthermore, the Application will analyze potential impacts of the proposed Project, by conducting site and computer-based review of the Project Area. As described throughout this PSS, some of these reviews include communication and involvement of the public and local governments, site wetland and waterbody delineations, consultation with appropriate federal, state, and local agencies, and conducting viewshed and noise impact analyses.

The PSS precedes the formal public scoping process and therefore, among other things, describes and identifies: the environmental setting in the Project Area, potential environmental and health impacts from construction and operation of the Project, proposed benefits of the Project, proposed studies (including pre-construction studies and post-construction monitoring for potential impacts to avian and bat species), proposed measures to minimize environmental impacts, applicable, reasonable and available alternatives, other required permits/authorizations, and other relevant information. The PSS also provides a discussion of potentially significant adverse environmental and health impacts to be assessed relating to the construction and operation of the Project, including potential impacts to: land use in the Project Area; public health and safety; terrestrial ecology (including avian and bat species) and wetlands; water resources and aquatic ecology; communications, transportation and utilities; cultural, historical and recreational resources; visual, including potential for shadow flicker; sound; electromagnetic fields; and impacts on the statewide electrical system.

The Application will contain a complete and detailed analysis of all Exhibits required under 16 NYCRR Part 1001 and Public Service Law § 164 (1) (Content of an Application) with the exception of Exhibits which are not applicable to wind energy projects. Figures and Appendices are referenced in the text of this PSS and presented at the end of the document.

3.0 Contents of Application

3.01 General Requirements - Public Contact and Project Information

The proposed Eight Point Wind Energy Center is located in Steuben County, New York, within the Towns of Greenwood, Troupsburg, and West Union, and is being developed by Eight Point Wind.

Applicant: Eight Point Wind, LLC
700 Universe Blvd., FEW/JB
Juno Beach, FL 33408
Telephone: (607) 301-3994
Fax: (561) 691-7307
Email: info@eightpointwind.com

Project Website: www.EightPointWind.com

Public Contact and Designated Agent: David Gil
700 Universe Blvd, FEW/JB
Juno Beach, FL 33408
Telephone: (561) 304-5201
Fax: (561) 691-7307
Email: david.gil@nee.com

Principal Officer: John DiDonato, Vice President
700 Universe Blvd, FEW/JB
Juno Beach, FL 33408
Telephone: (607) 301-3994
Fax: (561) 691-7307
Email: info@eightpointwind.com

Document service should be made to the Project's public contact (Mr. David Gil). The Article 10 Application will indicate if additional document service will be requested at that time for the Applicant's agent or counsel, and related contact information will be included.

Additional inquires related to the Project can be directed to info@EightPointWind.com or at (607) 301-3994. The Project website can be found at <http://eightpointwind.com/>.

Eight Point Wind, LLC is a limited liability company formed on January 29, 2016 in Delaware, that will develop, own, operate and maintain a wind powered wholesale generating facility in Steuben County, New York,. Eight Point Wind, LLC is a wholly-owned, indirect subsidiary of NextEra Energy Resources, LLC (NEER). NEER is located at 700 Universe Blvd, Juno Beach, Florida 33408.

A copy of the Certificate of Formation is attached as Appendix D.

3.02 Overview and Public Involvement

Description

The proposed Project comprises wind energy generation facilities located in Steuben County, New York. This Project will be located in the Towns of Greenwood, Troupsburg, and West Union, New York. The proposed Project Area boundary (see Figure 2) consists of approximately 45,500 acres of land, and the general landscape is a mix of agricultural and forest land.

The proposed Project will consist of up to 32 wind turbines. The total size of the Project will be approximately 102 MW. Proposed components include access roads, buried and overhead (as necessary) collection lines, collection substation, point of interconnection (POI), permanent meteorological (met) towers, staging/laydown yards, and an operations and maintenance (O&M) building. An approximately 18-mile overhead 115 kV transmission line will also be constructed to connect the Project to the New York State electrical transmission grid. As discussed above, the transmission line will be permitted separately through the Article VII process. The Article VII application will include line location and right-of-way, a description of the transmission facility, environmental impact studies, a statement of facility need, reasonable alternative routes and support for proposed routes, and related additional information. Information regarding the transmission line and the Article VII application will be shared with the public, local governments and other stakeholders as soon as it becomes available.

Application Content Summary

The Preliminary Scoping Statement (PSS) complies with all sections found in the PSL Section 164 and 16 NYCRR Part 1001 (Content of an Application). This PSS offers preliminary Project design information, as it is currently planned, with available supporting figures, and appendices. The Article 10 application will provide more detailed, thorough, and refined design information, analyses, and content.

Pre-Application Public Involvement

The Applicant prepared a Public Involvement Program (PIP) plan in accordance with the requirements of 16 NYCRR § 1000.4 (see Appendix C of this PSS). The PIP was submitted to the Siting Board on January 29, 2016. Following the receipt of comments on the PIP, the PIP was updated, finalized, and filed by the Applicant on March 29, 2016. An additional update to the PIP was filed July 8, 2016, which made updates to stakeholder information based upon public comments, changes in elected and appointed officials, and a revised (reduced) Project Area boundary. The PIP was created to identify and involve affected stakeholders (see Appendix A of the PIP for a Master List of Stakeholders). Furthermore, the PIP tracks the development of a plan for consulting with these stakeholders (see Appendix B of the PIP). Eight Point Wind has

completed the pre-PSS consultations set forth in the PIP's Appendix B and has held multiple stakeholder meetings. Meetings are summarized in the Meeting Log (Appendix A).

Eight Point Wind has mailed informational flyers to over 30,000 property owners and has held two open houses accessible to residents of the Study Area, in accordance with the PIP. These open houses were well attended (averaging 80-90 attendees each) and were successful in educating the stakeholders and the public on the details of both the proposed Project and on the Article 10 requirements and process and receiving information from the stakeholders. PIP activities are ongoing, and include regular communications about the Project and application process through our stakeholder contact list.

Post-Application Public Involvement

After submission of the Article 10 Application, Eight Point Wind will continue to engage stakeholders, sponsor public outreach activities to encourage involvement and open communication with non-public entities, attend town hall or town board meetings, and continue meeting with stakeholders.

Ongoing PIP activities will continue to be tracked and filed in the Meeting Log which is posted on the Project website and submitted to the Siting Board on a regular basis.

Analysis of Fitness for Certification

Additionally, the Application will include an overall analysis of the facts and merits of the Eight Point Wind Project specifically addressing each required finding, determination and consideration the Siting Board must make or consider in its ultimate decision on the Application, and providing the basis for granting its approval.

3.03 Location of Facilities

Figure 2 of this PSS shows the boundary of the area in which Project facilities are currently proposed (“Project Area”) and the corresponding Study Area which encompasses at least five miles adjacent to the Project Area. The Article 10 Application will include detailed topographic mapping based on a 2013 (or more recent) version of the United States Geologic Survey (USGS) 1:24,000 edition Greenwood, Troupsburg and Rexville topographic quadrangles which will include contours, roads, railways, utility corridors, streams, waterbodies, and other features of interest.

The proposed locations of Project facilities will be identified on topographic base maps (USGS), as well as aerial photos (ESRI), in order to provide a clear understanding of the Project layout in relation to existing resources and features. Municipal boundaries (county, city, town, and village) will be obtained from NYS Geographic Information Systems (GIS) Clearinghouse and ESRI and provided on appropriate mapping.

Maps will identify the locations of Project components to the greatest extent practicable (pending final micro-siting and engineering), including:

- Wind turbines
- Met towers
- Access roads
- Collection lines (mostly buried and some overhead)
- Laydown/staging areas
- O&M building
- Collection substation
- Point of Interconnection facilities and upgrades
- Temporary concrete batch plant (if necessary)

Per Article 10 PSL §1001.3 (b) and (c) the Project is not anticipated to include any ancillary features not located within the Project Area.

The Project will be sited on lands within the Project Area obtained through lease and/or purchase agreements with landowners. The Project Area will contain up to 32 wind turbines with a generating capability of approximately 102 MW. A description and graphical representation of applicable, reasonable and available alternatives considered during the development of the Project will be described in the Application.

The Project will interconnect with the Bennett Substation in Hornellsville, New York, north of the Project location, via a 115 kV overhead transmission line. The 115 kV transmission line is anticipated to be greater than 10 miles in length, and therefore will be permitted through the Article VII process. The Article 10 Application will provide a map showing the location of the

proposed 115 kV transmission line as will be filed in the Article VII application. Figure 2 provides the study area corridor currently being evaluated, within which the 115 kV transmission line is anticipated to be located.

3.04 Existing Land Use and Project Planning

A map of the existing land uses for the Project Area has been prepared (see Figure 3) using publicly available data from the Steuben County GIS Department and the classification codes of the New York Office of Real Property Services (NYSORPS). The following classifications are used to identify the different land use types: Agricultural; Residential; Vacant Land; Commercial; Recreation and Entertainment; Community Services; Industrial; Public Services; and Wild, Forested, or Conservation Lands and Public Parks. For the Application, the land use will be further described, refined, and mapped based on site-specific investigations and documentation. A map of the existing vegetated cover showing crop lands, forested lands and other cover types is helpful in providing land use context as well (see Figure 4).

In addition to land use maps, mapping of existing transmission facilities within the Study Area will be provided in the Application. These transmission facilities include buildings and any existing overhead or underground lines for gas, electric, or telecommunication companies.

Maps showing special designation areas such as agricultural districts (see Figure 5), flood prone zones (see Figure 6), critical environmental areas and recreational/sensitive areas will be prepared using up-to-date databases such as the NYS GIS Clearinghouse and Agency sources, and included in the Application. The Applicant will also identify any Project properties that are participating in New York's section 480-A Forest Tax Law (Real Property Tax Law § 480-a).

Parcels where Project components will be located, and those within 2,000 feet, will be mapped to detail current land use, tax parcel number, and record of ownership. Additionally, any publicly known proposed land use plans for any of these parcels, will be mapped using data from the Steuben County GIS Department. The Towns of Greenwood, Troupsburg and West Union do not have zoning codes.

Mapping of all parcels within the Study Area will be shown on aerial photography in the Application. Aerial photography will also be overlaid with proposed Project facilities, access roads and limits of clearing, in order to show the relationship with existing structures and vegetation cover types. Aerial photography dates and sources will be referenced.

To meet requirements of the Article 10 Application, a detailed review of the impacted municipalities was conducted to identify those with comprehensive plans. While Steuben County does not have a comprehensive plan, it does have an Economic Development Plan (<http://steubencountyida.com/wp-content/uploads/2014/06/Steuben-County-Economic-Development-Plan-2014-15-FFV.pdf>). The Eight Point Wind Energy Center is consistent with the Steuben County Economic Development Plan's Strategic Priority and Action Plan:

Strategic Priority #1: Retain and grow Steuben County's business base through expansion of existing businesses, innovation and commercialization of technology.

- Action Item A: Business Retention and Expansion
 - Target primary economic development engines:
 - Renewable Energy (biomass, wind, solar)

Steuben County currently hosts four operational wind farms (Marsh Hill, Howard, Cohocton, and Dutch Hill) comprised of 85 wind turbines, with a combined capacity of approximately 185 MW. The Eight Point Wind Energy Center will be consistent with existing facilities currently operating in the County.

A qualitative assessment of the Project's compatibility with existing, proposed and allowed land uses will be presented in the Application. The assessment will evaluate the short- and long-term effects of Project-generated noise, odor, traffic and visual impacts, if any, on the use and enjoyment of areas within one mile of Project facilities. This assessment will include evaluation of the compatibility of the Project's above-ground structures, as well as any underground interconnections, with surrounding land uses. The assessment will specifically address impacts to nearby land uses that may be of particular concern to the community, such as residential areas, schools, civic facilities, recreational facilities and commercial areas.

The Application will also include a description of the community character in the Project Area, an analysis of impacts from the construction and operation of the Project on that community character, and proposed avoidance or mitigation measures that will minimize impacts on community character.

3.05 Electric Systems Effects

A System Reliability Impact Study (SRIS) is currently in progress for the Eight Point Wind Energy Center Project by the New York Independent System Operator (NYISO). The SRIS evaluates a number of power flow base cases, as provided by the NYISO, including expected flows on the system under normal, peak, and emergency conditions to evaluate the effects on stability of the interconnection. Additionally, as per the Application requirements, technical analyses of thermal, voltage, short circuit, and stability are being performed to evaluate the impact of interconnection. If available, the SRIS will be included as an Appendix to the Article 10 Application.

The Article 10 Application will describe the impact of the proposed facility on transmission system reliability in the State in greater detail.

The SRIS currently in progress is based on the originally proposed 32 GE 3.23 MW wind turbine generators. The Applicant has filed a Material Modification Determination request with NYISO updating the items listed below. It is anticipated that NYISO may re-work some of the SRIS study scope. The anticipated changes are:

- Change wind turbines from (32) GE 3.23 MW to (27) GE 3.43 MW plus (5) GE 1.715 MW
- Interconnection length changed to 18 miles from 10 miles.

The Applicant is optimistic that these proposed changes are non-material and anticipates receiving a SRIS by March 2017.

Preliminary indications from a Feasibility Study completed in August 2015 indicate the Project would not have any adverse impact to the New York transmission system and show that a new 115kV breaker and its ancillary equipment could be added to an existing open bay in the NYSEG Bennett Substation. Corresponding metering, SCADA, communication protection and control would be required. Upgrades needed to maintain system reliability would be completed prior to commencing operations.

3.05.1 Applicable Engineering Codes and Standards, Guidelines and Practices

The facility and interconnection will be designed in accordance with applicable standards, codes, and guidelines. Such standards may include (but are not limited to):

- ANSI – American National Standards Institute,
- ASCE – American Society of Civil Engineers,
- ASTM – American Society for Testing and Materials,
- Building Code of New York
- IEEE – Institute of Electrical and Electronic Engineers,

- NEC – National Electric Code,
- NERC – North American Electric Reliability Council,
- NPCC – Northeast Power Coordinating Council, Inc.,
- NYSCR – New York State Reliability Council,
- OSHA – Occupational Safety and Health Administrator,
- Underwriters Laboratories

The Article 10 Application will describe which codes and standards are applicable to each facility and interconnection component and provide certification for the wind turbine model to be installed at the proposed facility, if available.

3.05.2 Maintenance, Management, and Procedures

Turbine commissioning will occur once the wind turbines and Project substation are fully constructed, upgrades to the Bennett Substation are completed and the NYISO is ready to accept transport of power to the New York grid. The commissioning activities are comprised of testing and inspecting the electrical, mechanical, and communications systems associated with the Project. The Article 10 Application will fully describe the equipment and material required and the timing of construction.

The operation and maintenance will follow the industry standard best management practices (BMPs). The Project will be staffed full time with both technical and administrative employees. The primary workers will be wind technicians, along with a site supervisor and administrator. O&M staff offices will be located in the O&M building at a location as yet to be determined within the Project Area or local community. Additionally, the Project will always have an on-call local technician who can respond quickly if required. If an event outside the normal operating range of the turbine occurs, the wind turbine will immediately and automatically shut down. A report will then be generated and received by the operations center. Project critical controls, alarms, and functions are properly coordinated for safe and reliable operation. The Project's Operations and Maintenance Plan will be submitted with the Article 10 Application.

Eight Point Wind operations will be based at the O&M building to provide direct access to wind turbine arrays and the electrical substation and will involve a range of tasks including administrative functions, recordkeeping, ordering of supplies, health and safety training, site security, monitoring of wind turbine components and ancillary structures, environmental monitoring, technical training, inspection of access/service road conditions, etc. In addition to routine maintenance activities, additional tasks and/or unscheduled maintenance associated with wind turbines, electrical components, access/service roads, ancillary structures and the Project substation will be completed as needed.

O&M personnel will complete routine inspections of wind turbines, the electrical substation, access/service roads, revegetated areas, met towers, transmission lines and other ancillary

structures to document facility conditions and identify any potential maintenance or improvement actions that may be needed. During these inspections, environmental conditions throughout the Project will also be observed and recorded for evaluation of the effectiveness of restoration activities. The Project will include implementation of the corporate Wildlife Resource Recovery System (WRRS) which is a standardized wildlife monitoring program and corporate documentation of any findings (see Appendix E). The WRRS is conducted prior to any maintenance work at turbine sites.

In addition to inspections, a detailed O&M schedule will be developed for interior and exterior inspections of all wind turbines. As part of these routine activities, the wind turbine components (*i.e.*, tower, nacelle, rotor hub, blades, gear box, electrical equipment, etc.) will be inspected and the results recorded. The structures around the towers (including step-up transformers and concrete pads, if needed) will also be inspected along with tower doors, locks and revegetated areas. The conditions around the towers will be recorded and incidental observations of wildlife also noted.

Specific schedules and frequency of routine O&M activities, facility inspections and anticipated preventative maintenance and/or additional periodic activities required for the safe, reliable and efficient operation of the Project are being developed. Detailed plans, specifications, maintenance recommendations, performance curves and any other manuals or documentation available for the selected turbines will be obtained from the manufacturer and maintained at the O&M building for ease of reference and troubleshooting.

In addition to on-site operations and maintenance, NEER has a twenty-four hour a day, seven day a week Control and Monitoring Center located in Juno Beach, Florida. This center operates over 10,000 turbines and is responsible for:

- Resetting of turbines as needed
- Calling out technicians based on projected wind conditions to optimize a project
- Communication with the local system operator and energy customer as required

The Control and Monitoring Center provides performance and reliability optimization through remote turbine operation and fault reset capability, the use of advanced real-time equipment performance statistical modeling for advanced diagnostics, benchmarking among similar components and replication of best practices across the fleet.

In addition to the Operations and Maintenance Plan, the Article 10 Application will describe how the substation-interconnection design meets the connecting transmission owner's requirements. New York State Electric and Gas (NYSEG) is the connecting transmission owner for the proposed Project and the point of interconnection (POI) will be NYSEG's existing 115kV Bennett Substation, which will connect to a 115 kV interconnection line. Furthermore, NYSEG,

as the transmission owner, will define the operational and maintenance responsibilities for the POI substation.

Wind energy generation facilities do not have blackstart capabilities.

The electrical system will require periodic preventative maintenance. If the work is to be performed in a right-of-way (ROW), notification and any permit(s) to work will be addressed with the appropriate agencies prior to starting the work. Routine maintenance will include condition assessment for aboveground infrastructure and protective relay maintenance of the substation, in addition to monitoring of the secondary containment system for traces of oil. The Article 10 Application will contain an inspection and maintenance schedule for the electrical system.

Vegetation control will be conducted in accordance with BMPs and are required immediately adjacent to the interconnect line to ensure safe operation and prevent damage to the line. The Article 10 Application will provide the vegetation clearance requirements for the collection and interconnect lines and the Project's Vegetation Management Plan will be submitted with the Application. This plan will describe the vegetation management practices for transmission lines and substations, inspection and treatment schedules, and environmental controls to avoid off-site effects.

The Applicant has designed the above ground interconnection facilities to accommodate the full 102 MW capacity of the Project and does not anticipate at this time entertaining proposals from utilities for sharing of facilities.

3.06 Wind Power Facilities

The proposed location and spacing of the Project's wind turbines and support facilities is initially based upon the site, landowner participation, a wind resource assessment, the environmental resources present, and the site proximity to existing transmission lines and substations. Some additional factors considered include the turbine spacing, agricultural area protection, biological and cultural resource avoidance, minimization of visual and noise impacts, and ample distance from residences and other buildings.

Eight Point Wind will propose a design that considers all of these factors and one which complies with applicable local, state, and federal regulations, ensures public safety, and minimizes impacts at residential or other sensitive structures.

3.06.1 Setbacks Required by Local Law or Ordinance

The Town of Troupsburg has adopted a local law specific to wind energy development (Local Law 1 of 2012- see Appendix F). The Town of West Union also has a local law specific to wind energy development and is currently considering revisions to that law in draft form (Local Law 2 of 2006 – see Appendix G). The Town of Greenwood is considering the feasibility of a local law guiding wind energy development which is also currently in draft form. The Applicant has consulted extensively with the towns concerning revisions to existing local laws and the development of new laws, and expects that the towns will complete the process of adopting new local wind laws before Eight Point Wind files its Article 10 Application. The following table provides a summary of the required (Troupsburg) and currently under consideration (West Union and Greenwood) setbacks in each town.

Table 2. Setbacks by Town

Setback Requirement	Town of Greenwood (draft)	Town of Troupsburg	Town of West Union (draft)
Residences	1200 ft from nearest off-site residence	1000 ft from nearest off-site residence	1,400 ft from nearest off-site residence
Site boundary / property lines	1.5 times the turbine height	600 ft from nearest site boundary property line	1.2 times the turbine height
Other built structures (barns, etc.)	1.5 times the turbine height	No specific ordinance	1.5 times the turbine height
Roads	1.5 times the turbine height	500 ft from nearest public roads	1.2 times the turbine height
Above ground utilities	1.1 times the turbine height	No specific ordinance	1.2 times the turbine height
Wetlands	No specific ordinance	100 ft from State Identified Wetlands	100 ft from State Identified Wetlands
Noise related setbacks	Adequate Distance from existing residence that the statistical sound pressure level generated by a WTG shall not exceed L10 - 50 dBA measured at the nearest residence located off the Site. If the ambient sound pressure level exceeds 50 dBA, the standard shall be ambient dBA plus 6 dBA	Adequate Distance from existing residence that statistical sound pressure level generated shall not exceed L10-60 dBA, L90 – 50 dBA or Lmax -70 dBA. If the ambient sound pressure level exceeds 50 dBA, the standard shall be ambient dBA plus 5 dBA	Adequate Distance from existing residence that statistical sound pressure level generated by a WTG shall not exceed L10 - 50 dBA measured at the nearest residence located off the Site. If the ambient sound pressure level exceeds 50 dBA, the standard shall be ambient dBA plus 6 dBA

If the revisions to the local wind laws currently being considered are adopted, the Project will comply with turbine setbacks requirements set forth by each of the towns impacted. If the revisions are not adopted, the Applicant may re-site turbines, ask the township(s) for a variance or change in law, or ask the Siting Board not to apply certain requirements.

3.06.2 Equipment and Turbine Selection

The wind resource analysis is used to optimize the turbine layout to maximize energy production within the context of the existing, site-specific constraints. A summary of the results from the deployment of met towers will be provided in the Application. The Applicant has had one meteorological tower on site since 2014 and one sound navigation and ranging (SODAR) device on site since 2013. Based on preliminary information on the quality of the existing wind resource, Eight Point Wind currently anticipates utilizing 27 wind turbines similar in size and configuration to the GE 3.43-137 wind turbine, although the specific turbine has not been finalized at this point. It is expected that the turbine ultimately chosen will be a three-bladed, up wind, horizontal-axis wind turbine with a rotor blade diameter of up to 137 meters. The turbine rotor and nacelle is expected to be mounted on top of a 110 meter tubular steel tower. Each wind turbine will be capable of generating up to 3.43 MW of electricity. In order to qualify for federal production tax credits, the Applicant also currently anticipates using five GE 1.715 wind turbines with a rotor blade diameter of 103 meters and an 80-meter tubular steel tower. Please see Appendix H for additional specifications for these wind turbine examples.

The Article 10 Application will include specifications, including third-party review and analysis, for the wind turbines ultimately selected for the Project. The proposed layout, including depiction of where the different sized turbines will be located, will be established based on site restrictions and setbacks, environmental and public safety factors, availability of wind energy and availability of land, and other relevant factors.

3.07 Natural Gas Power Facilities

This requirement is not applicable to the Eight Point Wind Energy Center, as there are no Natural Gas Power Facilities included in the proposed Project.

3.08 Electric System Production Modeling

The analyses presented in this section of the Article 10 Application will be developed using computer-based modeling tools (GEMAPS, PROMOD or similar). Eight Point Wind will consult with DPS and the NYSDEC to develop an acceptable input data for the simulation analyses. This data includes modeling for the proposed Eight Point Wind Energy Center's output that will be utilized in calculating the projected emissions predicted to be displaced by the Project from other operating generating facilities.

The Application will expand upon the fact that wind turbines generate electricity without combusting fuel or releasing pollutants into the atmosphere and estimate the levels of sulfur dioxide (SO₂), nitrogen oxides (NO_x), and carbon dioxide (CO₂) emissions in the region with and without the proposed facility.

In addition to calculations of approximated regional air emission levels with and without the proposed facility, the Article 10 Application will estimate the annual prices representative of NYISO Zones within the Control Area of New York State with and without the proposed facility.

Additionally, the Application will provide the estimated capacity factor for the proposed facility, the estimated monthly, on peak, shoulder, and off-peak megawatt output capability factors, and the estimated average annual and monthly production output for the facility in megawatt-hours (MWh) for the proposed facility. An estimated production curve and estimated production duration curve over an average year will be estimated and the effects of this facility will be estimated for the energy dispatch of existing resources and co-generation facilities.

The Article 10 Application will provide digital copies of inputs and outputs used in the simulations required in 16 NYCRR § 1001.8(a).

3.09 Alternatives

This section of the Application will address the requirements of Article 10 that dictate the need to include a description and evaluation of applicable, reasonable and available alternatives for the proposed Project. Eight Point Wind has designed this Project to best take advantage of the available wind resource and bulk power transmission system in Steuben County, New York, and has made an effort to site the Project in areas that are supportive of wind projects. Steuben County currently has four operating wind facilities. The Project's location in a strong wind resource area positions the Project to best assist New York State in addressing its Clean Energy Plan and other policies directed at meeting climate change goals and advancing the integration of renewable energy.

Based on results of the Feasibility Study and the anticipated transmission system capacity availability in the area, the Project is being designed to have a nameplate capacity not to exceed 102 MW. Therefore, the objective of the preferred alternative(s) is to construct a wind energy generating facility that can produce up to 102 MW of renewable energy. This will be enough electricity to meet the average annual consumption of approximately 42,000 households, based on average annual electric consumption of 10.9 MWh for the U.S. and 7.1 MWh for New York State, respectively (USEIA, 2015).

The location selected for the Project site is among the most suitable areas in New York for commercial scale wind energy production. The Applicant does not own or have under option other properties in New York that could be considered an applicable, reasonable and available alternative for a wind generating project comparable to this project. Preliminary selection of wind turbine locations is driven by many essential operational factors, both technical and economical. Eight Point Wind selected the proposed Project Area because of the presence of the good wind resource, available land from willing landowners, the relative ease of accessing the wind turbine sites, the relative ease of connecting to the existing electric transmission grid, and sufficient available capacity on the grid. Additional factors are reasonable local laws, compatible land use, topography, cooperative landowners, and avoidance of areas considered of high statewide significance or environmental sensitivity.

The initial Project Area, as originally described in the PIP (1/29/16), encompassed approximately 99,000 acres across seven towns. As a result of Eight Point Wind's public outreach efforts, input from stakeholders, and further investigation and study of the region, the Project Area has evolved to a reduced size of approximately 45,500 acres across three towns and will be reduced further as the location of the turbines and ancillary facilities is further refined.

Eight Point Wind, in accordance with 16 NYCRR § 1001.9, Exhibit 9, will include a description of applicable, reasonable and available alternative location sites for the proposed Project. Unlike other entities, the Applicant does not have eminent domain authority or the ability to condemn

private property. Therefore, the alternatives analysis will be limited to property under the Applicant's control (*i.e.*, option, lease or ownership).

The Application will provide information regarding the general site selection process for the Project which will include an overview of the rationale and procedures that have gone into the selection of the Project Area, and a discussion of the benefits associated with the selected location. Project layouts are currently being evaluated by the Applicant and will continue to be refined throughout the Article 10 process with input from Project stakeholders, and based upon the results of key resource studies and environmental impacts assessments. A proposed Project layout will be presented in the Certificate Application along with a discussion of the alternative layouts considered.

In addition to an overview of the Project Area selection and Project layout processes, the Article 10 Application will include discussions of the following other alternatives:

- Alternative scale and numbers of wind turbines
 - Smaller machines greater in number
- Alternative Project Configuration
 - Turbine and other facility locations
 - Arrangement and design alternatives
 - Spacing / Wake losses / Project Optimization
 - Local ordinances / Setbacks / Available land
- No Build Alternative

Alternative generating technologies such as solar, natural gas, and nuclear are not feasible due to agreements with landowners limiting development to wind energy and related facilities.

3.10 Consistency with State Energy Planning Objectives

New York Energy Law § 6-104 requires the State Energy Planning Board to adopt a State Energy Plan. The latest iteration of the New York State Energy Plan was announced on June 25, 2015. The 2015 State Energy Plan (the Plan) contains a series of policy objectives and coordinates with New York’s Reforming Energy Vision (“REV”) initiative and the objectives to significantly reduce greenhouse gas (GHG) emissions while stabilizing energy costs. As stated by the PSC in its 2015 REV Order, “A significant increase in the penetration of renewable resources is essential to meeting our objectives, state goals and proposed federal requirements.”

The Plan is based on a set of five Guiding Principles, each of which is supported by the Eight Point Wind Energy Center:

1. **Market Transformation:** With each new large renewable energy project, the local and regional supply chain is strengthened and expanded. The Project will help stimulate the local economy through direct and indirect spending and the demand for trained wind technicians.
2. **Community Engagement:** Eight Point Wind has been, and will continue to be fully engaged with local and state stakeholders (as described in the PIP).
3. **Private Sector Investment:** The Applicant is making a considerable capital investment to develop the Project.
4. **Innovation and Technology:** The Project will utilize state-of-the-art wind turbine technology that has been developed to increase efficiency while reducing noise impacts.
5. **Customer Value and Choice:** By increasing the amount of wind generated power available, the Project will allow customers greater choices in the types of electricity and the pricing they choose to utilize (NYSEPB, 2015).

The Plan builds on the principles above with additional initiatives, goals, and targets. By adding up to 102 MW of clean, renewable wind power into the New York State energy market, the Project is consistent with the Plan and instrumental in meeting the NY 2030 Targets of:

- 40% reduction in greenhouse gas emissions from 1990 levels;
- 50% of electricity generation from renewable energy sources

To further the State’s commitment to renewable energy, the New York State Energy Research and Development Authority (NYSERDA) has proposed a comprehensive Clean Energy Fund (CEF). The CEF is part of the REV initiative, a 10-year \$5 billion funding program to support clean energy market development and innovation and to secure renewable energy resources as part of New York’s clean energy future.

The Project will also increase fuel diversity within New York State by increasing the amount of electricity produced by wind generation facilities. The New York electric utility system relies on

supply from numerous fuel sources, including natural gas, hydroelectric, nuclear, wind, oil, and coal, as well as interconnections with its neighbors and demand-response resources. The Project is consistent with the Plan and other associated State policies, which are designed to encourage the development of renewable energy projects and contribute to the transition of New York's energy markets. Immediate benefits from the Project would include economic development, jobs for the community, greater stability in consumer energy bills, cleaner air, and compliance with the Plan and federal mandates.

In addition to policies in New York State, federal policy has also recognized the need for increased supply of energy to the U.S., and for new renewable energy resources such as the proposed Project. The Project is consistent with Executive Order 13212 (dated May 18, 2001), which states, "The increased production and transmission of energy in a safe and environmentally sound manner is essential to the well-being of the American people." In 2015, the Environmental Protection Agency (EPA) established the first ever restrictions on carbon pollution from power plants, the largest source of unregulated CO₂ emissions in the U.S. Through the Clean Power Plan, EPA states, "With abundant clean energy solutions available, and building on the leadership of states and local governments, we can make continued progress in reducing power plant pollution to improve public health and the environment while supplying the reliable, affordable power needed for economic growth. By doing so, we will continue to drive American leadership in clean energy technologies" (Executive Office of the President, 2013).

The Article 10 Application will further address Project impacts on state and federal energy policies.

3.11 Preliminary Design Drawings

Drawings developed in support of the Article 10 Application will be prepared utilizing computer software, such as AutoCAD or MicroStation, and labeled accordingly and under the direction of a professional engineer, landscape architect, or architect who is licensed and registered in the State of New York. These drawings will be labeled “preliminary” and/or “not for construction purposes.”

These scaled plans will show proposed buildings, wind turbine locations, access roads, laydown and staging areas, collection line locations, and other improvements at the Project. These drawings will include elevations for buildings and structures, as well as dimensions and other information as required per Exhibit 11 of Article 10. The correct layout of the facilities in relation to surrounding properties will be depicted to the extent practicable, given that final micro-siting and engineering will not be completed until receipt of the Certificate during the Compliance Filing stage.

Any proposed underground and overhead facilities will be depicted in drawings. Underground facilities will be detailed based on the proposed depth and level of cover. Overhead facilities proposed height above grade and the specifications of components will be identified.

Typical Stormwater and erosion control measures to be implemented for the Site will be included in the Article 10 Application. The Article 10 Application will also generally describe the typical scenarios that would result in cut and fill necessary to construct the facility, such as constructing an access road on a side slope, or siting a wind turbine on a slight slope.

A lighting plan detailing the type, number, and location of FAA required aviation navigation lighting, along with any facility safety lighting, will be provided in the Application. The numbers and intensity of all lighting will be kept to the minimum level necessary for worker safety, and measures such as motion activated controls and down-shielding of fixtures to focus the lighting on work areas will be utilized to minimize any unnecessary light impacts beyond the immediate work area.

The Article 10 Application will include a detailed list of engineering codes, standards, guidelines, and practices that Eight Point Wind intends to conform to during the planning, designing, construction, and operation of the facility. The following is provided as a representative list of applicable codes and standards, which will be updated as needed in support of the Article 10 Application:

- American National Standards Institute (ANSI)
- Institute of Electrical and Electronics Engineers (IEEE)
- Insulated Cable Engineers Association (ICEA)

- American Society of Mechanical Engineers (ASME)
- National Electric Code (NEC)
- National Electrical Safety Code (NESC)
- National Electric Manufacturers Association (NEMA)
- National Fire Protection Association (NFPA)
- Uniform Building Code (UBC)
- Uniform Plumbing Code (UPC)
- United Laboratories (UL)
- American Iron and Steel Institute
- American Institute of Steel Construction
- International Building Code (IBC) 2006
- AASHTO Standard for Aggregates
- ASCE 7-05 Minimum Design Loads for Buildings and Other Structures
- Federal OSHA 1910.269 Training

3.12 Construction

A preliminary Quality Assurance and Control Plan will be included in the Article 10 Application. This plan will detail staffing positions and qualifications necessary to hold such positions and demonstrate the monitoring process for the facility. The Application will also include a statement from the Applicant confirming that all requirements for the protection of underground facilities contained in the Public Service Law § 119-b, as implemented by 16 NYCRR Part 753, as well as pole-numbering and marking requirements implemented by 16 NYCRR Part 217, will be met.

Construction Activities

Several activities must be completed prior to the proposed commercial operation date. The majority of the activity relates to equipment ordering lead-time, as well as design and construction of the facility. Below is a preliminary list of activities necessary to develop the Project. Pre-construction, construction, and post-construction activities for the proposed Project include:

- Ordering of all necessary components including towers, nacelles, blades, foundations, and transformers;
- Turbine micro-siting;
- Complete surveys of properties, locations of all structures and roadways;
- Soil borings, testing, and analysis for proper foundation design and materials;
- Complete construction of access roads, to be used for construction and maintenance;
- Construction of collection lines (mostly underground, and where necessary, above ground);
- Design and construction of the collection substation;
- Installation of tower foundations;
- Installation of aboveground transmission lines;
- Tower placement and wind turbine setting;
- Acceptance testing of facility; and
- Commencement of commercial operation.

Private turbine access roads will be built adjacent to the towers, allowing access to the turbines during and after construction. For construction, access roads are typically built 36 feet wide to allow for the delivery of wind turbine components. After construction, the access road width is usually reduced to approximately 20-feet wide, will have an aggregate surface as cover, and will be adequate to support the size and weight of maintenance vehicles. The specific turbine placement will determine the amount of private roadway that will be constructed for the Project. During the construction phase, several types of light, medium, and heavy-duty

construction vehicles will travel to and from the Site, as well as private vehicles used by construction personnel.

Construction Management

While a yet to-be determined Engineering, Procurement and Construction (EPC) contractor will be tasked with constructing the Project, Eight Point Wind's managers will always be on-site overseeing the EPC contractor and will ultimately be responsible for managing and constructing the Project. The EPC contractor will undertake the following activities:

- In conjunction with Eight Point Wind, secure building, electrical, grading, road, and utility permits;
- Perform detailed civil, structural and electrical engineering;
- Schedule execution of construction activities; and
- Forecast labor requirements and budgeting.

The EPC contractor also serves as key contact and interface for subcontractor coordination. The EPC contractor will oversee the installation of communication and power collection lines as well as the substation. The EPC contractor will also oversee the installation of roads, concrete foundations, towers, and blades, as well as the coordination of materials receiving, inventory, and distribution. The Project will be constructed under the direct supervision of an on-site construction manager.

The construction team will be on-site to handle materials purchasing, construction, quality control, testing, and start-up. Throughout the construction phase, ongoing coordination will occur between the project development and the construction teams. The on-site construction manager will help to coordinate all aspects of the proposed project, including ongoing communication with local officials. Even before the Project becomes fully operational, the O&M staff will be integrated into the construction phase. The construction manager and the O&M staff manager will work together continuously to ensure a smooth transition from construction through wind farm commissioning and, finally, operations.

Civil Works

Completion of the Project will require various types of civil works and physical improvements to the land. These civil works may include the following:

- Improvements (if necessary) of existing public roads to access the Project Area;
- Construction of road improvements adjacent to the wind turbine access roads to allow construction and continued servicing of the wind turbines;
- Clearing and grading for wind turbine tower foundation installations;
- Installation of underground collection lines for connecting the wind turbines to the Project collection substation;

- Installation of any site fencing and security; and
- Restoration and re-vegetation of disturbed land when construction activities are completed.

Any improvements to existing public access roads will consist of re-grading and filling of the surface to allow access in inclement weather. Turbine access roads will be sited in consultation with local landowners and completed in accordance with local building requirements where these roads intersect with public roads. Turbine access roads will be located to facilitate temporary construction cranes and continued operation and maintenance of wind turbines. Siting roads in areas with unstable soil will be avoided wherever possible. All roads will include appropriate drainage and culverts while still allowing for the crossing of farm equipment. The turbine access roads will be approximately 20 feet wide (approximately 36 feet wide during construction) and will be covered with road base designed to allow passage under inclement weather conditions.

Commissioning

The Project will be commissioned after completion of the construction phase. The Project will undergo detailed inspection and testing procedures prior to final turbine commissioning. Inspection and testing will occur for each component of the wind turbines, as well as the communication system, meteorological system, obstruction lighting, high voltage collection and collection system, and the SCADA system.

Complaint Resolution

Throughout the construction process and operations, Eight Point Wind will remain committed to addressing any comments, concerns or complaints brought forth by the public. If issues are identified by the public they will be addressed through a formal Complaint Resolution Procedure which will be included as an Appendix in the Article 10 application. The Applicant shall make the Complaint Resolution Procedure available to the public. The Applicant will make reasonable efforts to respond to all complaints from residents and businesses quickly and resolve complaints in a timely manner.

3.13 Real Property

Eight Point Wind intends to purchase and/or enter into option, lease or easement agreements for all parcels where turbines, collection lines, access roads and any other Project components will be sited, as well as for some parcels surrounding these areas. The Applicant has been working with public and private landowners to purchase or obtain leasing or easement rights for the Project since 2013, and will continue to work towards securing all land necessary to construct and operate the Project. Appropriate documentation supporting these actions, as available, will be included in the Article 10 Application. Landowner agreements will be obtained and a statement confirming this and the privileges necessary to proceed with all interconnections for the facility will be provided prior to the start of construction on a particular parcel of land.

Eight Point Wind will identify any property or right-of-way mapping for all proposed interconnection facilities and off-property access drives and construction staging or lay-down areas and the O&M building. Eight Point Wind does not anticipate that any improvement district expansions are necessary for the facility.

A map of the Project facilities showing all property boundaries, owner and tax map information, easements, public and private roads, zoning and related designations will be included in the Article 10 Application.

3.14 Cost of Facilities

Eight Point Wind will provide in the Application a detailed estimate of total capital costs associated with the Project for review by the Siting Board subject to applicable regulations; however, certain information is considered proprietary and will be provided under separate cover and requested to be treated as trade secrets under applicable regulations. Overall, the Project is expected to cost approximately \$200 million.

Detailed costs identified will be estimates (in 2016 dollars), and will include the costs associated with development and permitting, wind turbines, the balance of Project equipment and engineering, and other costs necessary for interconnecting the Project to the New York grid. Sources for these costs will be determined based on NEER's industry-leading experience building wind energy projects in the United States and the estimated prices from third-party vendors associated with the various Project components.

A cost estimate will be provided for the 115kV transmission line separately through the Article VII proceeding.

3.15 Public Health and Safety

This exhibit will provide a detailed statement that identifies and evaluates any potentially significant adverse environmental, public health, or safety impacts associated with the construction and operation of the Eight Point Wind Energy Center.

The impacts on both environmental and public health associated with the proposed Project are unlike conventional power plants, as wind energy generates electricity without emitting pollutants. Therefore, one of the greatest advantages of wind energy production is the maintenance of air quality. While very minor levels of air emissions may be produced during construction activities (as described in Section 3.17), wind energy technology allows for production of electricity without creating any gaseous, liquid, or solid wastes, and therefore eliminates the need to treat, collect, transport and dispose of such waste in any significant amount. Since wind-based power generation does not require the combustion of carbon-based fuels, most of the environmental and human health impacts typically associated with airborne emissions from power generation are not applicable. Therefore, wind energy is considered to be one of the cleanest forms of electricity production.

Potentially adverse impacts or problematic occurrences that have occasionally been associated with producing wind energy include ice shedding, tower collapse, blade failure, stray voltage, and fire in the turbines. The likelihood of these very infrequent occurrences causing health or safety concerns can be further minimized through implementation of proper siting and setbacks from residences, roadways, and other existing facilities.

As required by 16 NYCRR §1001.15 (e), the potential health and safety issues identified with wind energy are briefly described below, and will be described in further detail in the Article 10 Application.

- Tower or blade failure refers to the possibility of the wind turbine tower collapsing or the blade breaking from the nacelle. This is an extremely rare occurrence. The construction design and layout, primarily the turbine selection and setbacks from residences, roadways, and other public areas, greatly reduce the chance of any potential incidents. The Application will discuss the potential for tower or blade failure, the risks to public health, and measures to be implemented to minimize and mitigate for blade failures, breaks or “throw.”
- Ice shedding or ice throw refers to the accumulation of snow and ice on the rotor blades which can result in melting snow/ice falling to the ground (ice shedding) or being thrown out some distance (ice throw) from the base of the tower. Sensors will minimize the chances of this ever occurring by automatically shutting down the wind turbine(s) when ice accumulates. The Application will discuss the potential for snow and ice to accumulate on towers and blades and

present additional information on potential risks to public health and measures to be implemented to minimize and mitigate any impacts from ice.

- Shadow flicker is the moving shadow cast by the turbine blades over identified receptors when the rotor is between the sun and a receptor's position. Certain individuals may be sensitive to the shadow flicker, and therefore a shadow flicker analysis of nearby residences will be conducted. The Application will present a site-specific shadow flicker analysis, as well as published information and scientific analysis on the subject, and measures to be implemented to minimize and mitigate any impacts from shadow flicker, such as setbacks from residences.

The only waste generated by the Project will be small amounts of solid waste generated during the construction phase, and that waste production is expected to be minimal. In addition, periodic turbine lubrication oil and filter changes will occur during operations and proper disposal will be performed. Construction related materials will require disposal in dumpsters which will be located in the construction staging areas. These materials include plastic, wood, cardboard, and metal packing materials, construction scrap, and general refuse, which will be properly recycled or disposed of at a nearby landfill facility. Small amounts of waste concrete will be generated during construction from concrete truck washout. Washout will be limited to designated locations near each foundation and upon completion of the Project the contractor will be responsible for removing and disposing of the concrete in appropriate locations. Additionally, small amounts of waste will be generated during routine maintenance activities (*e.g.*, cardboard, cleaning rags and general refuse) which will be collected and disposed of in appropriate landfills. The Article 10 Application will identify specific local solid waste collection services, landfills, or transfer stations within the Project area.

The potential for any impacts related to low-frequency sound and audible-frequency noise will be addressed in Exhibit 19 of the Application.

The Project is not expected to have any negative impacts to public or private water supplies. There will be no significant water withdrawal involved with operation of the Project. However, there will be limited usage of potable water at the O&M building which will be comparable to a single family residence. Best management practices, such as erosion control measures (silt fence, hay bales, etc.) will be utilized in order to avoid stormwater runoff to wetlands or waterbodies. The Application will include a proposed Stormwater Pollution Prevention Plan (SWPPP) as well as a proposed Spill Prevention and Control Countermeasures (SPCC) plan.

Community emergency response services for the Project Area and larger Study Area include:

- Greenwood Volunteer Fire Department
- Troupsburg Volunteer Fire Department
- West Union Volunteer Fire Department

- Steuben County Office of Emergency Services
- Steuben County Sheriff's Office
- New York State Police
- Saint James Mercy Hospital (Hornell)

While impacts from construction and operation will be minimized and mitigated to the extent practicable there may be some unavoidable temporary impacts such as limited amounts of dust and emissions from construction vehicles. Unavoidable impacts will be identified and discussed in the Application, along with proposed mitigation and monitoring activities to be employed.

The Application will also identify and discuss any irreversible and irretrievable resources that will be impacted as a result of the Project's construction or operation. This includes land area that is dedicated to turbine foundations, access roads and the Project substation and O&M building. Exhibit 15 of the Application will include a detailed list of the land resources permanently impacted to the exclusion of others.

3.16 Pollution Control Facilities

This requirement is not applicable to the Eight Point Wind Energy Center Project, as the facility will not generate pollutants on any ongoing basis, nor require any pollution control facilities.

3.17 Air Emissions

Wind turbines generate electricity without combusting fuel or releasing pollutants into the atmosphere and therefore are not subject to the U.S. Environmental Protection Agency (EPA) New Source Performance Standards (NSPSs) to regulate emissions of air pollutants from NSPS (per the Clean Air Act Extension of 1970). Once operational, the Project will produce electricity without emitting greenhouse gasses, sulfur dioxide (SO₂), or nitrogen oxides (NO_x).

Existing ambient air quality data is monitored statewide by NYSDEC and reported annually by region. The Project Area is located in Steuben County in NYSDEC's Region 8, which includes 11 counties in the Rochester/Finger Lakes region of New York. There are five monitoring stations in Region 8, including the Pinnacle Station (Monitoring Station #5001-4) in Steuben County. Pinnacle Station monitors for carbon monoxide (CO), ozone (O₃), SO₂, and inhalable particulates (PM_{2.5}). In 2015, the air quality data collected at the Pinnacle Station were within the acceptable levels established by the National Ambient Air Quality Standards (NAAQS) set by the EPA for all pollutants measured (NYSDEC, 2016). No local air monitoring data is available to further characterize air quality in the immediate vicinity of the proposed Project.

During operations, wind turbines generate electricity without combusting fuel or releasing pollutants into the atmosphere. Therefore, the table required by 16 NYCRR § 1001.17(c) (summarizing the rate and amount of emissions) is not applicable to the Project for operations, and will not be included in the Article 10 Application.

However, there will be temporary small air emissions created during the construction phase of the Project, primarily resulting from exhaust associated with temporary diesel fired generators, vehicles and construction equipment, and dust generated from construction activities. These temporary emissions are not anticipated to be of levels that would have any significant impact on ambient air quality within the Project Area. These impacts will be minimized to the extent practicable through the use of best management practices such as:

- Use of ultra-low sulfur diesel fuel in all diesel engines;
- Proper maintenance of all manufacturer supplied air pollution control equipment on all engines;
- Minimization of diesel idling time whenever possible;
- Use of dust and erosion control measures consistent with NYSDEC's New York State Standards and Specifications for Erosion and Sedimentation Control, such as spraying access roads with water as necessary (NYSDEC, 2005).

The Project will not involve the use or on-site storage of bulk ammonia, and therefore an analysis of an accidental release of ammonia is not required.

The operation of the Project, and the addition of up to 102 MW's of clean, renewable energy into the State's energy portfolio, will have a net positive impact on air emissions. The Article 10 Application will quantify, in tons, the estimated annual displacements from other generating facilities resulting from facility operation for the following pollutants: CO₂, NO_x, SO₂, mercury compounds, and lead compounds.

3.18 Safety and Security

Safety and security are of the highest priority to Eight Point Wind and NEER. Safety and security risks are anticipated to be minimal during both construction and operation of the Project, as they have been on other NEER wind energy projects across the United States.

Safety has deep roots in NEER's culture. We constantly strive to be role models within our industry, and evidence of our *ZERO Today!* philosophy that all injuries are preventable can be found throughout our company. Since launching *ZERO Today!* in 2008, we have deepened our commitment to safety by working to turn our vision into a reality for our employees, our suppliers and our communities.

Specific actions to improve our safety performance include:

- Safety meetings and safety communications educate employees on safety risks, and share best practices for risk mitigation.
- Employee observation programs identify injury risks in the field, leading to focused injury prevention countermeasures.
- Our Safety Information Management System captures all information on injury events, unsafe conditions and near misses. This information then drives a heightened level of safety responsibility and prevention among employees, supervisors and managers.
- Employees at each work location perform baseline hazard assessments to identify risks and mitigation strategies. These routine, periodic assessments and inspections ensure corrective measures are developed for newly identified hazards.
- We train employees on advanced incident investigation techniques and root cause identification software. The software helps determine employee, management and system failures and then prompts the user to identify and assign appropriate countermeasures to address the risks.
- We train our employees on "Peer- to- Peer" Coaching to successfully address unsafe behaviors before an injury event or near-miss occurs.

We are committed to maintaining a safe working environment, including using suppliers with a demonstrated commitment to safety. In general, suppliers who have a presence on company premises of 30 or more cumulative person-days within 12 months are required to comply with the requirements of NEER's Supplier Safe and Secure Workplace policy whereby suppliers are expected to demonstrate an Experience Modification Rate (EMR) for safety purposes that's equal to or better than average for their industry. An EMR is a ratio that indicates how a company's Workers' Compensation losses compare to those of other companies with similar classifications. We maintain specific guidelines for the implementation of these goals and invoke them as requirements within contractual agreements with our suppliers.

In order to ensure security and safety, a preliminary safety plan will be provided in the Article 10 Application to help identify the numerous precautions that will be taken in regard to safety

relative to the design, layout, construction and daily operations of the Project. In addition, a Safety Plan is currently in place for all development site-related activities, such as environmental and cultural surveys, land surveys, micro-siting, etc. (see Appendix I).

The construction contractor will be required to provide a site security plan for Project construction, which will be developed by the contractor selected to lead the construction of the facility (*i.e.*, EPC contractor) after certification of the Project has been granted. Preparation of the site security plan will initiate immediately following selection of the EPC contractor, and will be provided to the Siting Board upon completion. Measures to ensure safety and security during construction may include (but not be limited to) fencing of the construction laydown yard, locking gates to the yard during off-work hours and posting signs notifying the public of active construction sites. A series of traffic related signs and driving measures will be put in place to help ensure safe driving conditions for the public and Project construction workers. The Applicant will communicate with stakeholders within the Project Area (and surrounding Study Area) to ensure their awareness of construction activities and the applicable safety and security measures.

Nearly all construction will take place on private property, generally set far back from roads and public spaces, reducing access to general public traffic. Primary access controls for ensuring public safety during both construction and operations include design setbacks, security fencing and locked access to each wind turbine and the collector substation, which functions as a way to restrict public access to the facilities.

Exhibit 18 will describe the purposes, equipment and planned usage for the various lighting that will be necessary for Project construction and operation. During construction this includes security lighting which will both ensure safe on-site worker activity, and also serve to minimize trespassing. Security lighting will be motion activated and focused downward in order to minimize any impacts to wildlife or visual receptors. In general, lighting used will be the minimum levels needed to accomplish the purpose and will not be used when unnecessary. Certain electronic security controls and surveillance systems may also be implemented.

Aviation obstruction lighting will be installed and operated according to FAA requirements (because the turbines are taller than 200 feet above mean sea level) in order to promote aeronautical safety. Aviation warning lights will be addressed in a dedicated Exhibit 18 section. To comply with FAA regulations, the Applicant will submit to the FAA a proposed lighting plan containing exact turbine coordinates, turbine dimensions, and lighting specifications. FAA prefers that submitted plans are based on final turbine locations so as to avoid multiple reviews of the same Project, so the Applicant does not have a lighting plan at this time.

With regards to cybersecurity of the Project's digital networks and communication systems, the Applicant will comply with the North American Electric Corporations (NERC's) CIP standards. The Applicant maintains a facility in Juno Beach, Florida that is compliant with the necessary

NERC CIP standards. All firewalls and servers are monitored 24 hours/day, 7 days/week by a Security Operations Center. All NEER employees are required to complete training in information security awareness.

In addition to these preliminary plans, Eight Point Wind will implement an Emergency Response Plan (ERP). This plan will outline the contingencies that would constitute a safety or security emergency, the appropriate response measures to be taken as a result of this emergency, any evacuation control measures that may be necessary, and the means by which the community will be notified of the emergency and any procedures that shall be followed. In addition, any on-site equipment and system information will be provided to the appropriate emergency response agencies, including the local fire and police departments. The local entities, all on-site equipment, and any on-site safety control measures (*i.e.*, fire extinguishers and their locations) will be included in the Draft ERP, which will be submitted with the Article 10 Application.

3.19 Noise and Vibration

A noise impact assessment is being conducted to determine what the existing environmental sound levels are within the current Project Area, what the expected operational sound levels from the Project are likely to be and how they compare to pre-construction levels and applicable local or State noise standards. Components of the assessment include the mapping of all potentially sensitive noise receptors, field measurements of current sound levels, an analysis of construction sound levels, the modeling of operational sound emissions and the determination of the various statistical quantities detailed in 16 NYCRR § 1001.19(f).

The field work and subsequent analyses will be carried out by a reputable acoustical engineering firm that has specialized in noise assessments for power generation projects. The acoustical engineering firm's qualifications and relevant experience will be included in the Application.

Two surveys of existing background sound levels will be undertaken to evaluate the possibility of seasonal variation, one in the summertime and one in the wintertime. The summertime survey data has been gathered and the data is currently being analyzed. The results will be provided in the Application. The locations of background sound level monitors are included as Figure 7. Exhibit 19 will include a report summarizing the noise expert's assessment of the ambient noise environment, using the sound data collected on-site during the summer and winter monitoring periods. Ambient pre-construction noise monitoring locations were determined based upon proximity of residences to wind turbines, variation in existing noise sources, and site access.

A map of the Project Area showing the location of sensitive sound receptors in relation to the Project, related facilities and ancillary equipment (including any related substations) will be included in the Certificate Application. A desktop analysis using aerial imagery and field verification was used to preliminarily identify and classify sensitive sound receptors within the Project Area. If access for field verification was not possible and aerial imagery could not provide an obvious classification of a structure (*i.e.*, residential vs. non-residential), the structure was assumed to be a sensitive sound receptor. The sensitive sound receptors shown will include residences, outdoor public facilities and areas, hospitals, places of worship, and schools.

3.19.1 Construction and Operations - Noise

Project construction will require the operation of heavy equipment for activities such as right-of-way clearing, access road construction, material and component delivery, installation of electrical interconnect, turbine foundation construction, turbine erection, and site restoration. It is expected that Project-related construction noise will be similar to that of typical road or utility construction projects. Construction noise may be audible on a temporary basis at

residences close to turbine sites, trenching operations or road building activities. While likely to go unnoticed in many areas because of the remote location of many construction activities (e.g., turbine sites) due to required setbacks from roads and residences, construction-related noise impacts will likely constitute a temporary unavoidable impact at some residences within the Project Area. An analysis will be performed to quantify the maximum exposure levels.

During operation, wind turbines generate sound that may be classified as either mechanical or aerodynamic in origin. Mechanical sounds produced by a wind turbine originate from the gearbox, generator, yaw drives, cooling fans, and the hydraulic system. Aerodynamic sounds are the largest component of wind turbine sound emissions and are created by the leading edge, trailing edge, and tip of the blade while it is rotating.

Sound emissions from the turbines once the Project is operational could be audible at residences and other potentially sensitive receptors within the Project Area. Analyses will be carried out to tabulate the sound levels at each residence in the immediate Project Area due to the Project alone, and the cumulative level including background noise as stated in 16 NYCRR § 1001.19(f). Impacts from low frequency noise or tones are not expected to be significant but will be evaluated in the study.

3.19.2 Extent and Quality of Information Required

As required by the Article 10 guidelines, both a summertime and wintertime survey of existing environmental sound levels will be conducted. The specified statistical parameters for background noise (L_{90} , L_{50} and L_{eq}) will be measured in both surveys and compared with model predictions of project noise associated with the proposed site plan. At least three 1/3 octave band frequency analyzers will be used as sound monitors to record the frequency spectrum of the existing sound levels. At least eight total measurement positions, distributed over the Project Area, will be used to evaluate potential geographic variability in sound level within the Project Area. Sound monitor locations being utilized are shown on Figure 7.

3.19.3 Proposed or On-going Studies during Pre-construction Activities

In accordance with 16 NYCRR § 1001.19, the noise assessment study will provide a thorough evaluation of the peer-reviewed literature regarding the potential for Project noise impacts. This information will be used to contextualize the results of the operational noise modeling described below.

The noise assessment study will follow the requirements outlined in 16 NYCRR § 1001.19(a-n). More specifically, the following tasks are currently anticipated.

1. The development of a map showing all potentially sensitive noise receptors in proximity to proposed turbine locations – primarily consisting of residences.

2. A survey of existing background sound levels in dBA conducted under summertime and wintertime conditions. Frequency analysis will also be used to illustrate the presence or lack of any discrete tones in the environment.
3. An evaluation of construction sound levels at potentially impacted and representative noise receptors will be carried out.
4. The average (L_{50} and L_{eq}) sound emissions from the operational project will be conservatively modeled and an estimate of the L_{10} project sound level will be made. While the L_{10} statistical level (the level exceeded for only 10% of the measurement period) is specified for project noise in 10 NYCRR § 1001.19(f)(4, 5, and 6), such a level cannot actually be calculated or modeled. Instead, the typical increase over the mean sound level will be estimated from actual measurements found in the published literature.
5. An evaluation of the potential for tonal noise and excessive levels of low frequency and infrasonic sound will be carried out.
6. Sound level contour maps, along with accompanying tables, will be developed.
7. The local noise standards relevant to the Project will be discussed along with design goals for the Project and compared to the modeling results.
8. Noise abatement options during Project construction will be discussed in the assessment report.
9. Noise abatement options for the operational Project, as necessary, will be discussed.
10. The potential for hearing damage, indoor and outdoor speech interference, interference with the use of outdoor public facilities, community complaints and structural damage will be discussed.
11. The methodology for a post-construction study to test and evaluate the Project's sound emissions will be described.
12. A complaint handling procedure will be outlined in the assessment report.
13. All modeling inputs, such as the turbine sound power level and modeling assumptions, will be fully described.

3.19.4 Avoidance and Minimization Measures

Planned measures to avoid or minimize the noise impacts from the Project include the following:

- Limiting construction activities to certain hours (7:00am-8:00pm) unless otherwise granted approval by the town.

- The overall layout will be optimized through micro-siting to minimize the number of required turbines and maximize their distances from potentially sensitive receptors.

3.19.6 Local Laws and Regulations

Local laws, ordinances and regulations (both current and draft laws under review) pertaining to noise within the Project Area include the Wind Energy Facilities Law of the Town of Troupsburg, New York (Local Law No. 1 of 2012) (see Appendix F), while those currently under consideration include the draft Wind Energy Facilities Law of the Town of Greenwood, New York, and the Wind Energy Facilities Law of the Town of West Union (Local Law No. 2 of 2006) (see Appendix G).

The following substantive provisions from the local wind energy laws pertain to noise:

Town of Troupsburg

Section 1.1.14 Setbacks for Wind Energy Conversion Systems (WECS).

- A. The statistical sound pressure level generated by a WECS shall not exceed $L_{10} - 60$ dBA, $L_{90} - 50$ dBA or $L_{max} - 70$ dBA measured at the closest exterior wall of any residence existing at the time of completing the SEQRA review of the application. If the ambient sound pressure level exceeds 50 dBA, the standard shall be ambient dBA plus 5 dBA. Independent certification shall be provided before and after construction demonstrating compliance with this requirement.
- B. In the event audible noise due to WECS operations contains a steady pure tone, such as a whine, screech, or hum, the standards for audible noise set forth in subparagraph I) of this subsection shall be reduced by five dBA. A pure tone is defined to exist if the one-third (1/3) octave band sound pressure level in the band, including the tone, exceeds the arithmetic average of the sound pressure levels of the two contiguous one third (1/3) octave bands by five dBA for center frequencies of 500 Hz and above, by eight dBA for center frequencies between 160 Hz and 400 Hz, or by 15 dBA for center frequencies less than or equal to 125 Hz.
- C. In the event the ambient noise level (exclusive of the development in question) exceeds the applicable standard given above, the applicable standard shall be adjusted so as to equal the ambient noise level. The ambient noise level shall be expressed in terms of the highest whole number sound pressure level in dBA, which is exceeded for more than five minutes per hour. Ambient noise levels shall be measured at the exterior of potentially affected existing residences. Ambient noise level measurement techniques shall employ all practical means of reducing the effect of wind generated noise at the microphone. Ambient noise level measurements may be performed when wind

velocities at the proposed Project Site are sufficient to allow Wind Turbine operation, provided that the wind velocity does not exceed 30 mph at the ambient noise measurement location.

- D. Any noise level falling between two whole decibels shall be the lower of the two.
- E. Each WECS shall be setback from Site boundaries, measured from the center of the WECS, a minimum distance of:
 - 1. 600 feet from the nearest Site boundary property line.
 - 2. 500 feet from the nearest public road.
 - 3. 1,000 feet from the nearest off-site residence existing at the time of application, measured from the exterior of such residence, whether or not such residence is in Troupsburg.
 - 4. 100 feet from state-identified wetlands. This distance may be adjusted to be greater or lesser at the discretion of the reviewing body, based on topography, land cover, land uses, and other factors that influence the flight patterns of resident birds.

Town of Greenwood (draft)

Section 1 § 15 Sound Levels and WTG Setbacks:

- A. Sound Levels. The statistical sound pressure level generated by a WTG shall not exceed $L_{10} - 50$ dBA measured at the nearest residence located off the Site. Sites can include more than one piece of property and the requirement shall apply to the combined properties. If the ambient sound pressure level exceeds 50 dBA, the standard shall be ambient dBA plus 6 dBA.
- B. Setbacks. Each WTG shall be located with the following minimum setbacks, as measured from the center of the WTG:
 - 1. 1,200 feet from off-site Residences, measured from the exterior of such Residence.
 - 2. 1.5 times the WTG Total Height from the nearest Site boundary property line.
 - 3. 1.5 times the WTG Total Height from the right of way of all public roads.
 - 4. 1.1 times the WTG Total Height from above-ground utilities, unless waived by the utility companies.
 - 5. 1.5 times the WTG Total Height from off-site occupied and permanent structures.

Town of West Union (draft)

Article II § 15 Sound Levels and WTG Setbacks:

- C. Sound Levels. The statistical sound pressure level generated by a WTG shall not exceed $L_{10} - 50$ dBA measured at the nearest residence located off the Site. Sites can include

more than one piece of property and the requirement shall apply to the combined properties. If the ambient sound pressure level exceeds 50 dBA, the standard shall be ambient dBA plus 6 dBA.

D. Setbacks. Each WTG shall be located with the following minimum setbacks, as measured from the center of the WTG:

1. 1,400 feet from off-site Residences, measured from the exterior of such Residence.
2. 1.2 times the WTG Total Height from the nearest Site boundary property line.
3. 1.2 times the WTG Total Height from the right of way of all public roads.
4. 1.2 times the WTG Total Height from above-ground utilities, unless waived by the utility companies.
5. 1.5 times the WTG Total Height from off-site occupied and permanent structures.

3.20 Cultural Resources

Introduction and Record of Consultation

Consistent with 16 NYCRR § 1001.20 and the New York State Historic Preservation Office Guidelines for Wind Farm Development Cultural Resources Survey Work (the SHPO Wind Guidelines; OPRHP 2006), the Applicant has initiated consultation with the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) to develop the scope and methodology for cultural resources studies for the facility. To date, formal consultation with the OPRHP has included initiating project review and consultation through NYSORPS's Cultural Resources Information System (CRIS) website and submission of three technical documents:

- *Request for Consultation Letter of February 4, 2016 : Proposed Eight Point Wind Energy Center, Towns of Canisteo, Greenwood, Hartsville, Hornellsville, Jasper, Troupsburg, and West Union, Steuben County; and*
- *Research Design for Phase IA/IB Cultural Resources Survey of Proposed Eight Point Wind Energy Project Steuben County, New York (submitted February 4, 2016)*
- *Project Shapefiles that show the preliminary Project layout.*

On February 29, 2016, the OPRHP provided comments to the Research Design and requested that, prior to fieldwork, the project's Architectural Historian meet with the OPRHP to delineate the Area of Potential Effect (APE), and discuss the methodology proposed for the study. Additionally, the OPRHP requested that the Research Design for the Phase IA/IB archaeological survey be modified to include selection of a subsample of each probability zone which would be tested at 5-m intervals, citing the importance for the identification of small upland sites, which are expected to predominate in the project area. On February 29, 2016, the Revised Research design reflective of these changes was submitted to OPRHP via CRIS. In its March 29, 2016 review letter, the OPRHP concurred with the Revised Research Design for Phase IA/IB Cultural Resources Survey.

A study of the impacts of construction and operation of the facility on cultural resources will be conducted and detailed in the Article 10 Application with the Phase IA/IB archaeological survey report and the historic architectural survey report included in the appropriate Appendix.

Because no field surveys have been conducted to date, the following details the results of desktop research on known archaeological resources and historic areas/buildings in close proximity to the Project and provides the overall approach to the Phase IA/IB surveys and the reconnaissance-level historic architectural survey. Ultimately, the Application will contain a full analysis of the impacts of construction and operation of the proposed facility on cultural resources identified, as well as the results of both the consultation with SHPO, the Phase 1A and Phase 1B studies, and the reconnaissance-level architectural survey. An Unanticipated

Discovery Plan is also provided below that identifies the actions to be taken in the event that resources of cultural, historical, or archeological importance are encountered during the excavation process.

PHASE IA/IB ARCHAEOLOGICAL SURVEY

Phase IA Archaeological Research

Background research will require an examination of the site files and archives at the OPRHP, online web-based Cultural Resource Information System (CRIS), New York State Library, and New York State Museum (NYSM) in Albany. This research will obtain information on recorded sites and previous cultural surveys in the surrounding area. Local histories, cartographic data, and other relevant information on the prehistoric and historic archaeological sites in the area will also be reviewed. Evaluation of archaeological and historical data from nearby sites will assist in developing a context for the cultural history of the area. An historical assessment of the Project area will include a review of historical maps, a literature search, and a review of county historical documents located at the New York State and County repositories. Web-based resources of the National Park Service and U.S. Department of Agriculture will also be consulted. Other records to be examined will include archaeological site maps, state archaeological site files, and National Register listings.

As part of the preliminary Project review, TRC has conducted a search of OPRHP records and identified 19 previously-recorded archaeological sites (NYSM and SHPO sites) in the vicinity of the Project (Table 3). In addition, eight cultural resources studies have been conducted in the Project vicinity. TRC reviewed the results and research designs of these nearby studies to gain an understanding of acceptable survey methods for projects in similar settings. For this research, historical maps, soil maps, and aerial photographs were also consulted.

Based on this research, TRC has developed a proposed field methodology for examining the Project APE, as discussed in more detail below. The Phase IA archaeological research will continue review of the OPRHP site files and cultural resources survey reports, historical maps, and aerial photographs, along with county and town histories in order to develop prehistoric and historic contexts of the Project vicinity.

Table 3. Previously Recorded Archaeological Sites within One Mile of the Project Area

Site Number	Site Name	Description	NRHP Status	Reference
A00321.000042	M. Happer Site	Precontact: lithic scatter	No DOE	OPRHP Site File
A101-07-00009	Dunning Site	Precontact: lithic scatter	No DOE	OPRHP Site File
A101-07-000010	Royce Kilmer Site	Precontact: Paleoindian through Late Woodland occupation Village site	No DOE	OPRHP Site File
A10107-000031	Carter/Fall Creek	Precontact: lithic scatter	No DOE	OPRHP Site File
A101-14-0001		Historic: bridge foundation	No DOE	OPRHP Site File
A101-14-0002		Historic: foundation	No DOE	OPRHP Site File
A10114.000016	McClay Store Site	Historic: nineteenth century store foundation	No DOE	OPRHP Site File
A10114.000017	Richter Grocery Site	Historic: nineteenth century foundation	No DOE	OPRHP Site File
A10114.000024	J. Davis Site	Historic: nineteenth century foundation	No DOE	OPRHP Site File
A10114.000025	W. Burton Site	Historic: nineteenth century foundation	No DOE	OPRHP Site File

Site Number	Site Name	Description	NRHP Status	Reference
A10114.000026	J. H. Ellison Site	Historic: nineteenth century foundation	No DOE	OPRHP Site File
A10114.000027	C. Crane Site	Historic: nineteenth century foundation	No DOE	OPRHP Site File
A101-25-0003	Hajea Site	Precontact: lithic scatter	No DOE	OPRHP Site File
A101-25-0004	Heely Site	Historic: foundation	No DOE	OPRHP Site File
A101-25-0005	E. Fenton Ashery Site	Historic: sawmill equipment	No DOE	OPRHP Site File
A101-25-0006	19th c Barn Ruin	Historic: barn	No DOE	OPRHP Site File
A10125.000020	Field Site 04-47801-01	Historic: late nineteenth to twentieth century residence	No DOE	OPRHP Site File
A10191.000785	Mill Trail Race	Historic	No DOE	OPRHP Site File

Source: OPRHP February 2016.

Phase IB Archaeological Survey

The results of background research, preliminary Project mapping, and USGS topographic maps were examined to determine the archaeological sensitivity of the Project APE. The probability of an area to yield archaeological resources is determined based on environmental factors, potential for disturbed soils, proximity to historic features (roads, bridges, canals, structures, etc.), and presence or absence of previously recorded archaeological sites. Areas of High Probability include areas in close proximity to previously recorded cultural resources or historic features, floodplains, stream confluences, areas adjacent to water sources (within 100 meters), headwater zones, prominent knolls, ridge fingers, benches, wetland edges, and rock overhangs. Areas of Moderate Probability include relatively level uplands displaced from perennial water

sources (greater than 100 m). Low Probability areas include moderate to steeply sloping surfaces and areas of existing ground disturbance.

Phase IB field methods will consist of both pedestrian and shovel test pit (STP) survey to locate all archaeological resources within the Project APE. In areas of High and Moderate Probability, TRC will excavate STPs at 15-meter intervals along survey transects in all proposed construction impact areas.

To help ascertain the viability of the probability-defined field methods, TRC will examine between 5 and 10 percent* of all areas identified as High and Moderate Probability with a 5-meter STP interval. The locations of the smaller subset of close interval testing in High and Moderate Probability areas will be based on suitable areas as determined in the field. (*Note: *The selection of size of the subset will be determined by individual parcel configuration*).

In areas of Low Probability, which consist predominantly of areas of steep slope, a combination of pedestrian survey and judgmental STP excavation will be conducted. Pedestrian survey will be conducted in lieu of shovel testing where steep slope, exposed bedrock, wetlands, and/or ground disturbance precludes the utility of shovel testing. Judgmental STPs will be excavated in areas of micro-topography, such as small level benches on steep slope, possible rockshelter locations, and narrow, ephemeral stream crossings.

Per the *OPRHP Guidelines*, all STPs will measure 30-50 centimeters (12-20 inches) in diameter, and will be excavated to sterile subsoil. All excavated soil will be screened through ¼-inch hardware cloth over tarps or plastic sheeting. Soil strata within each shovel test will be recorded on standardized forms describing Munsell color and USDA soil types. All recovered artifacts will be bagged, labeled, and sent to the TRC laboratory in Lanham, Maryland for processing and analysis. All shovel tests will be backfilled after completion. All positive shovel tests will be recorded using a *Trimble* sub-meter accurate GPS unit and plotted on aerial photographs and Project maps.

Additional STP (radials) will be excavated around positive tests in a radial pattern in order to define Isolated Finds. Per OPRHP guidelines, when artifacts are discovered in an isolated shovel test context, a minimum of eight additional shovel tests at 1 meter (3.3 feet) and 3 meter (10 feet) intervals will be excavated. Eight radial tests will not be excavated when artifacts are found in two or more adjacent or nearby STPs since this technique is appropriate only for isolated finds and not for archaeological sites. All work will be conducted inside the Project APE. No archaeological survey is anticipated in areas where there will be no proposed disturbance, unless field conditions or construction feasibility warrant a change in design resulting in potential ground disturbance in those areas. Currently, no deep testing is anticipated based on the absence of deep alluvial floodplains in the Project footprint as presently defined.

Laboratory Analysis and Curation

All recovered artifacts, photographs, field form records, field notes and maps will be returned to TRC's Lanham, Maryland office for processing. Data analysis and survey results will be prepared for inclusion in a Technical Report. Artifacts will be cleaned, catalogued, and analyzed according to the *New York Archaeological Council Standards*, and selected items illustrated. All analysis will be conducted according to the *OPRHP Guidelines*, and the Secretary of the Interior's *Standards and Guidelines for Curation* (36 CFR Part 79). Lab work will be undertaken to determine the age, function, cultural affiliation and significance of the identified sites. Deeds of gift will be obtained for any collections derived from this investigation prior to submittal to the NYSM or other identified repository for permanent curation at a state-approved facility (to be identified via consultation with the OPRHP).

Phase IA/IB Survey Report

Following the completion of the research and fieldwork, TRC will prepare a Phase IA/IB Survey Report following the OPRHP Guidelines. The report will contain an environmental overview, prehistoric and historic cultural contexts, summaries of previous cultural studies, listings of archaeological and historic sites in the surrounding area, field work methods and results, and recommendations. In support of the text, historical maps and photographs will be prepared to illustrate findings. Tables including the artifact inventory will be appended as needed. If archaeological sites are identified, the report will provide recommendations on whether the sites are eligible or ineligible for inclusion on the NRHP, or if additional Phase II studies would be required to determine site eligibility. A Draft Report will be produced and submitted to SHPO for preliminary review. Following review, the Project will make any necessary changes and a Final Report will be produced.

UNANTICIPATED DISCOVERY PLAN

The Article 10 Application will include an Unanticipated Discovery Plan that will identify the actions to be taken in the unexpected event that resources of cultural, historical, or archaeological importance are encountered during Project construction. This Unanticipated Discovery Plan presents the approach that would be employed to address such emergency discoveries to ensure that any potentially significant archaeological resources discovered are dealt with in full accordance with State and Federal requirements, including the most recent *Standards for Cultural Resource Investigations and Curation of Archaeological Collections in New York State*. This approach would also ensure that procedures and lines of communication with the appropriate government authorities are clearly established prior to the start of construction so that discoveries can be addressed in a timely manner, minimizing the impacts to the construction schedule to the extent possible.

At present, no archaeological sites are recorded within the Project APE. Based on the background research conducted, the Project Area is considered archaeologically sensitive, and a potential exists for identifying archaeological resources – possibly deeply buried – within the

Project APE. Therefore, all involved personnel will follow standardized procedures in accordance with State and Federal regulations.

Both the environmental inspectors and the construction personnel will be provided with a preconstruction briefing regarding potential cultural resources indicators. These indicators would include items such as recognizable quantities of bone, unusual stone deposits and ash deposits, or black-stained earth that could be evident in spoil piles or trench walls during construction. In the event that potentially significant cultural resources or human remains are discovered during construction, the environmental monitors and construction personnel would be instructed to follow the specific requirements and notification procedures outlined below. Cultural resource discoveries that require reporting and notification include any human remains and any recognizable, potentially significant concentrations of artifacts or evidence of human occupation.

If cultural resources indicators are found by construction personnel, the construction supervisor would be notified immediately. The supervisor, in turn, would notify the environmental inspector, who would notify a designated archaeologist, who would be available to respond to this type of find. Based on the information provided, the archaeologist would determine if a visit to the area is required and, if so, would inform the construction crews. No construction work at the immediate discovery site that could affect the artifacts or site would be performed until the archaeologist reviews the site. The site would be flagged as being off-limits for work, but would not be identified as an archaeological site per se in order to protect the resources. The archaeologist would conduct a review of the site and would test the site as necessary. The archaeologist would determine, based on the artifacts found and on the cultural sensitivity of the area in general, whether the site is potentially significant and would consult with the OPRHP regarding site eligibility.

Discovery of Human Remains

If Native American human remains are encountered, procedures for such discoveries would be followed in accordance with State regulations. This will involve consultation with the SHPO or THPO and appropriate interested parties in an effort to identify and notify next of kin, closest lineal descendant, or the Indian tribes who may be culturally affiliated with the remains, and to determine appropriate treatment and disposition of the remains.

When human remains are encountered, all work in the near vicinity of the remains would cease and reasonable efforts made to avoid and protect the remains from additional impact. In cases of inclement weather, the human remains would be protected with tarpaulins. The County Medical Examiner would be notified of the discovery. If the remains are found to be other than human, construction will be cleared to proceed. If the remains are human, and are less than 75 years old, the Medical Examiner and local law enforcement officials will assume jurisdiction.

If the remains are found to be human and older than 75 years, the OPRHP will be notified and may assume jurisdiction of the remains. If jurisdiction is assumed by the OPRHP, they will a) determine whether the human remains represent a significant archaeological resource, and b) make a reasonable effort to identify and locate persons who can establish direct kinship, tribal community, or ethnic relationship with the remains. If such a relationship cannot be established, then the OPRHP may consult with a committee to determine the proper disposition of the remains. This committee shall consist of a human skeletal analyst, Native American members of current State tribes recommended by the Governor's Council on Indian Affairs, and "an individual who has special knowledge or expertise regarding the particular type of the unmarked human burial."

A plan for the avoidance of any further impact to the human remains and/or mitigative excavation, re-interment, or a combination of these treatments will be developed in consultation with the OPRHP and if applicable, appropriate Native American tribes or closest lineal descendants. All parties will be expected to respond with advice and guidance in an efficient time frame. Once the plan is agreed to by all parties, the plan will be implemented.

The plan will include a provision for work stoppage upon the discovery of possible archaeological or human remains. Evaluation of such discoveries, if warranted, will be conducted by a professional archaeologist, qualified according to the NYAC *Standards*. The Unanticipated Discovery Plan will specify the degree to which the methodology used to assess any discoveries follows the NYAC *Standards*.

HISTORIC ARCHITECTURAL SURVEY

In compliance with Section 106 of the NHPA and New York State permitting requirements, Eight Point Wind will conduct a reconnaissance-level historic architectural survey for the Project. The goal of the survey is to document architectural resources 50 years or older within the Project APE and evaluate their eligibility for listing on the NRHP. For those properties that are listed or recommended as eligible for listing on the NRHP, Eight Point Wind will further investigate properties for potential visual effects.

Agency Consultation, Definition of Area of Potential Effects (APE), and Background Research

Eight Point Wind will consult with the OPRHP, define the APE for direct and indirect effects, and seek approval of its proposed survey methodology. The APE for above-ground structures is defined as the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist. For assessment of effects to historic architectural resources, the APE is determined in relation to the nature and scale of new construction, improvements, or demolitions to be made as a result of the continuing operation and maintenance of the wind turbines, the substation, meteorological towers, and transmission line.

For assessment of direct effects, the APE is defined as the area of construction. For assessment of indirect effects, the APE is assumed to be a 5-mile radius from any turbine location and a 0.5-mile radius from any transmission line or substation construction.

Eight Point Wind conducted a desktop analysis for previously surveyed and NRHP-listed/eligible properties within the 5-mile APE utilizing the OPRHP's CRIS and NRHP online database. Table 4 below lists the historic architectural resources that are NRHP-listed or NRHP-eligible within a 5-mile radius.

Table 4. NRHP-Listed and NRHP-Eligible Historic Architectural Resources within a 5-Mile Radius of the Project APE

ID	Name	Address	County	NRHP Status
00321.000010		511 Main St Independence, NY	Allegany	Eligible
00321.000015		531 Main St Independence, NY	Allegany	Eligible
90NR00027	Alfred Village Historic District (133 individual resources)	Alfred, NY	Allegany	NRHP Listed
00343.000003	Andover Free Library	40 Main St Andover, NY	Allegany	Eligible
00343.000006	The Castle	23 Hill St Andover, NY	Allegany	Eligible
00343.000040		11 East Ave Andover, NY	Allegany	Eligible
00343.000054	Private Residence	47 East Greenwood St Andover, NY	Allegany	Eligible
00343.000060	Andover Central School	31-35 Elm St Andover, NY	Allegany	Eligible
00343.000063		44 South Main St Andover, NY	Allegany	Eligible
00343.000065		30 South Main St Andover, NY	Allegany	Eligible
10107.000030		4863 NY-248 Canisteo, NY	Steuben	Eligible
10114.000006	Greenwood Methodist Church (Structure 10)	2729 NY-248 Greenwood, NY	Steuben	Eligible

ID	Name	Address	County	NRHP Status
10114.000007	Cross-Gable Residence	2707 NY-248 Greenwood, NY	Steuben	Eligible
10114.000008	Commercial Building (Heckman Grocery-Structure 33)	2700 NY-248 Greenwood, NY	Steuben	Eligible
10114.000009	Greek Revival Residence (Structure 54)	2670 NY-248 Greenwood, NY	Steuben	Eligible
10114.000010	Gothic Revival Residence (Structure 57)	2667 NY-248 Greenwood, NY	Steuben	Eligible
10114.000011	Italianate Residence (Structure 19)	2721 NY-248 Greenwood, NY	Steuben	Eligible
10114.000012	Brick Queen Anne Residence (Structure 22)	2717 Main St Greenwood, NY	Steuben	Eligible
10114.000013	Greek Revival Residence (Structure 31)	2703 NY-248 Greenwood, NY	Steuben	Eligible
10114.000036		1467 Church Hill Rd Greenwood, NY	Steuben	Eligible
10125.000019	Jasper-Troupsburg Elementary School	908 Main St Troupsburg, NY	Steuben	Eligible
10125.000030		2902 CR-117 Troupsburg, NY	Steuben	Eligible

Viewshed Analysis

Using information from CRIS, Eight Point Wind will also produce a viewshed analysis using tree heights and topography to accurately define those areas within the Project viewshed. Eight Point Wind will submit the viewshed analysis to OPRHP for concurrence with the results. As part of that submittal, Eight Point Wind will recommend that the scope of the field survey be limited to only those areas within the APE for direct and indirect effects.

Architectural Field Survey

The architectural field survey will revisit all previously recorded resources that fall within the Project APE as determined by the viewshed analysis. The field inspection will also determine the presence of any previously unrecorded architectural resources 50 years old or older that fall within the Project APE. Each resource will be documented via photography and its location will be recorded on field maps. Notes will also be taken in the field recording the current conditions of each resource.

Architectural Survey Assumptions:

- 5-mile APE for indirect effects to be further defined by viewshed analysis
- Final APE and survey methodology to be approved by the OPRHP

Report

Upon completion of the field survey, Eight Point Wind will analyze the surveyed architectural resources in accordance with the NRHP Criteria in 36 CFR § 60.4. Eight Point Wind will then produce a Historic Architectural Survey report for submittal to the OPRHP and as part of the Article 10 application. The letter report will include a brief statement of methodology and summary of field results. Survey results will include an annotated properties list and photographs of each surveyed resource. Each resource will be evaluated for its eligibility to the NRHP and any necessary recommendations for further work will be included among the conclusions. The report will also include maps showing the location of all previously recorded and newly recorded architectural resources in the APE. Surveyed resources will also be entered individually into CRIS with the report and GIS shapefiles for the Project.

3.21 Geology, Seismology, and Soils

A preliminary investigation of the geology, seismology, and soils specific to the Project Area has been conducted via desktop review to provide an overview of the general conditions anticipated for the Project. Additionally, observations about localized geologic topographic conditions are made based upon reconnaissance level field surveys that were conducted in summer 2016.

The Article 10 Application will include an exhibit with a study of the geology, seismology, and soils impacts of the facility. Each study will consist of the identification and mapping of existing conditions, an impact analysis, and proposed impact avoidance and mitigation measures. Also an evaluation of the constructability and suitability of building and equipment foundations will be addressed based off of site specific conditions. A more detailed analysis of the site specific conditions, engineering characteristics, anticipated impacts and proposed avoidance and mitigation measures will be provided in the Application.

A map delineating existing slopes (0-3%, 3-8%, 8-15%, 15-25%, 25-35%, 35% and over) within the drainage area potentially impacted by the Project and interconnections has been prepared using the USGS National Elevation Dataset (see Figure 8). ESRI ArcGIS® Software will be used to identify drainage areas and develop detailed slope mapping for the Project Area.

The Application will include the proposed site plan which will show existing and proposed contours at two-foot intervals for the individual wind turbine sites, access roads, laydown and staging areas, and interconnections. The Applicant proposes to use two-foot contours constructed from publically available Digital Elevation Models (DEM) as a basis for the calculation of earth disturbance calculations.

Due to the nature, scope and scale of wind power project design and development, many potential impacts described herein, and the correlating mitigation options, are based upon a preliminary design and conservative evaluation of Project impacts. In many cases potential impacts are based upon preliminary design criteria, “worst case” assumptions and/or anticipated permit conditions. Based on these generally conservative impact assumptions, appropriate mitigation measures are then presented. Actual impacts and correlating avoidance, minimization, and/or mitigation measures, will not be known until the appropriate reviewing agencies have seen detailed plans or engineering design and made a permit decision based upon this more detailed information.

The Article 10 Application will generally describe the typical scenarios that would result in cut and fill necessary to construct the facility, such as constructing an access road on a side slope. Eight Point Wind will provide preliminary calculations of the quantities of cut and fill required to support the construction of all buildings, structures, and access roads within the Project using the assembled two-foot contours. Separate approximations for topsoil, sub-soil, and rock will

be provided. These summaries will be based off of publicly available datasets and compared to the preliminary site design.

The Application will include the preliminary estimates of fill, gravel, asphalt, and surface treatment materials that are anticipated to be required for wind turbine foundations, access roads, staging areas, and other associated Project components. The Application will describe the anticipated amount and characteristics of all fill materials expected to be imported into the site. As mentioned previously, no material is expected to be removed from the Project Area. Specific on-site locations for the storage of cut and fill material during the construction phase of the project will be identified and provided in the Preliminary Design Drawings.

Construction of the Project will involve typical excavation techniques as would be used for similar work and road clearing activities. The primary areas of ground disturbance will include the foundation sites for wind turbines and operation and maintenance facilities, along with access roads and buried collector cable routes. Commonly used excavation equipment such as backhoes and / or bulldozers are expected to perform much of the work. Collector cable embedment is likely to utilize a cable trencher, plow or blade where possible. A specific description of the processes determining excavation locations will be provided in the Application. Factors used to screen the use of excavation will include but are not limited to, soil corrosivity, depth to bedrock, bedrock competence, and other subsurface constraints.

The discussion of suitability for construction of buried cables included in the Application shall consider the potential for dewatering, soil resistivity, and mechanical protection of the cables. Based on discussions with contractors that have constructed wind projects and buried collection circuit systems in the same region as the Project, it is anticipated that the contractor for this Project can excavate buried cable trenches with relatively little difficulty using a rock saw, cable trencher or plow. In the event that bedrock is encountered, it is anticipated to be rippable due to its content, and will thus be excavated using large excavators, rock rippers, or chipping hammers. Within the Project Area, there are two main geologic units present. These are the Conneaut Group and the Machias Formation. Both units were formed in the upper Devonian and are composed of predominately shale, siltstone, and sandstone rock types. Most of the rock types are made up of soft fragments and do not pose any obstacle to excavation. However, if the bedrock is not rippable, it will likely be excavated by pneumatic jacking.

The Applicant will identify locations where trenchless excavation methods, like horizontal directional drilling (HDD), may be proposed. Specifically, the prospective use of HDD methods will be focused on navigating facilities around streams, wetlands and/or significant natural resources indicated by state and federal agencies and when deemed pertinent to the Project. Specific locations will be determined utilizing appropriate siting methods including appropriate setbacks from water resources and investigations into local bedrock/sub-soil characteristics. Erosion control measures and inadvertent return plans utilized during the operation will also be provided in their entirety.

The utilization of blasting techniques is not anticipated, so the Applicant intends to provide a general statement in the Application indicating that blasting is not likely to be required. This statement will reference the results and data obtained from a preliminary geotechnical investigation and indicate that a preliminary blasting plan need not be provided, an assessment of potential impacts is not required, and mitigation efforts as a result of blasting is not necessary. However, in the event that a unique situation is encountered and blasting is required, a blasting plan will be prepared and included in the Application. The plan will address all blasting operations and logistics necessary to mitigate risks associated with the operation such as safe transportation, coordination with local safety officials, assessment of potential adverse impacts, and the evaluation of reasonable mitigation measures resulting from blasting impacts.

A desktop review of the USDA NRCS Web Soil Survey was used to collect soil data within the Project Area (see Figure 9). The USDA NRCS Web Soil Survey indicated that the majority of the soils found in the Project Area were soils of statewide importance for farmland. The NRCS soil data is categorized by mapping unit, land area coverage of the site boundary (acreage), percent land coverage of the site boundary (percentage), slope, drainage class, hydrologic soil group, and farmland classification. The soils included below represent the soils which are the most commonly found within the Project Area. These soils are described in more detail below in order to provide a general understanding of the soils within the Project Area. The Soil Survey of Steuben County, New York indicates that the Project Area predominantly consists of silty loams, ranging from somewhat poorly drained to well-drained soils. The drainage class of these soils ranged from class C to class D. Class C and Class D soils are defined by slower infiltration rates. In addition, the soils established on site were classified by their farmland importance and were classified as either “Farmland of statewide importance” or “Not prime farmland.”

General descriptions of the primary NRCS soils series found within the Project Area are provided below.

Soil Descriptions

Oquaga channery silt loam, 3 to 12% slopes (OgB) –

Consists of well drained soils that occur on gentle slopes of benches, ridges, and hills. These soils are developed in loamy till dominated by sandstone, siltstone, and shale, and its typical profile is 0-26 inches thick.

Wellsboro channery silt loam, 2 to 8% slopes (WoB) –

Consists of channery silt loams that are moderately well drained. These soils are commonly found in the summits and side slopes of hills or mountains that were formed from 0-22 inches of loamy till.

Morris channery silt loam, gently sloping, extremely stony, 1 to 8% slopes (MSB) –

These soils consist of loamy till from reddish sandstone, siltstone, and shale. These soils are shallow and somewhat poorly drained. They are located in areas that are level to gently sloping and occur in summits and base slopes of hills or mountains.

Morris channery silt loam, 2 to 8% slopes (MrB) –

These soils consist of loamy till reddish sandstone, siltstone, and shale. These soils are shallow and somewhat poorly drained. They are formed in back slopes and side slopes of hills or mountains.

Volusia channery silt loam, 8 to 15% slopes (VoC) –

Consists of somewhat poorly drained soils that occur on footslopes and side slopes of hills or mountains. These soils are developed in loamy till derived from interbedded sedimentary rock, and its typical profile is 0 to 17 inches thick.

Wellsboro channery silt loam, 8 to 15% slopes (WoC) –

Consists of channery silt loams that are moderately well drained. These soils are commonly found in the backslopes and sideslopes of hills or mountains that were formed from 0-22 inches of loamy till.

Oquaga channery silt loam, 12 to 20% slopes (OgC) –

These soils consist of channery silt loams that are well drained. These soils are formed from channery loamy till with lithology dominated by reddish sandstone, siltstone, and shale. They are located in areas that are gently sloping and occur in back slopes and side slopes of benches, ridges, and hills.

Lackawanna-Wellsboro association, extremely stony, 2 to 30% slopes (LC) –

These soils consist of loamy till derived mainly from reddish sandstone, siltstone, and shale. These soils are well drained and are commonly found in the summit and interfluves or hills or mountains.

Volusia channery silt loam, 3 to 8% slopes (VoB) –

Consists of somewhat poorly drained soils that occur on footslopes and base slopes of hills or mountains. These soils are developed in loamy till derived from interbedded sedimentary rock, and its typical profile is 0 to 17 inches thick.

Mardin channery silt loam, 2 to 8% slopes (MdB) –

These soils consist of channery silt loams that are moderately well drained. These soils are shallow and develop loamy till of summits and side slopes of hills or mountains.

Mardin channery silt loam, 8 to 15% slopes (MdC) –

These soils consist of channery silt loams that are moderately well drained. These soils are commonly found in the shoulders and side slopes of hills or mountains. These soils are developed in loamy till and its typical profile is 0 to 72 inches thick.

Lordstown-Arnot association, very steep, 40 to 70% slopes (LRF) –

Consists of well drained soils that occur on backslopes and side slopes or benches, ridges, and hills. These soils are developed in loamy till derived from sandstone and siltstone, and its typical profile is 0 to 9 inches thick.

Maps, figures, and analyses will be prepared using information obtained from the USGS Online Spatial Geology Data, the USDA NRCS Web Soil Survey, and the preliminary geotechnical investigation conducted for the Project. These data sets will be used to discuss the suitability of the location for the Project in relation to variable soil types and conditions as well as addressing local bedrock characteristics. Analyses will include descriptions of soil structure, texture, and percentage of organic matter. Infiltration capacity and rate of recharge of the local soils will be discussed in order to address any dewatering operations which may have to occur during the construction and operation of the facilities. Studies will also include discussion on depth to bedrock and underlying bedrock types, including vertical profiles showing soils, bedrock, water table, and seasonal high groundwater. These characteristics will be depicted in relation to typical foundation depths on the facility sites, and any area to be disturbed for the construction of access roads, and all off-site interconnections required to serve the Project.

The overall suitability of the soil conditions for construction will be analyzed based on the results of the preliminary geotechnical investigation. This investigation will include test borings at a subset of proposed turbine and substation locations and reviews of publicly available surface and subsurface soils, bedrock, and groundwater data. However, such surveys are costly and not prudent to perform until wind turbine locations are final and the last stages of engineering have occurred. Therefore, Eight Point Wind does not plan to have full geotechnical data for all wind turbine sites included in the Application.

The results of the preliminary geotechnical investigation will be summarized in Exhibit 21 of the Article 10 Application. This summary will provide a description of regional geology, tectonic settings, seismology, and include any known areas of karst geology within or adjacent to the Project Area. It is also intended to analyze and address any perceived impacts to the regional

geology as a result of construction and operation of the facilities. This report will also address the construction of facilities within or adjacent to steep slopes and define methodologies to avoid severe erosion during extreme precipitation events and the sedimentation of water resources downstream. Data utilized in this report will be based on a Project-specific site visit conducted by a geotechnical expert and their review of publicly available data including the Surficial Geologic Map of New York, Geologic (Bedrock) Map of New York, Soil Survey of Steuben County, Geology of Steuben County, Aquifers of New York State, and Geology of New York among other resources, coupled with the analysis of the test borings to be completed at a subset of turbine/substation locations.

In addition to the preliminary geotechnical results, Exhibit 21 of the Application will include a preliminary engineering assessment on the foundation designs expected to be appropriate for the conditions and the scale of wind turbines being contemplated. A foundation evaluation will be undertaken to address the on-site geologic conditions for determination of the preferred specifications of the turbine foundations. Recommendations will be made in order to mitigate corrosion of concrete and steel from the Project Area's specific soil conditions.

Prior to commencing construction the Applicant will carry out similar investigations at each proposed turbine site. Subsurface investigation activities will consist of soil borings and rock coring at each of the proposed wind turbine and ancillary structure locations, along with test pits, seismic testing, and additional laboratory testing that will be performed to further evaluate the subsurface soil, bedrock, and groundwater conditions. The results of the site specific subsurface investigation will inform the final Project design and determine the need for additional analysis.

Only temporary, minor impacts to physiography and geology are expected as a result of construction activities. For example, where turbine and access road sites are not located on completely level terrain, some cut and fill or addition of fill will be required; however, the impact to overall topography will be minor.

The seismology of Steuben County was analyzed based on the New York 2014 Seismic Hazard Map (see Figure 10). Steuben County falls between 2 percentage levels on the Hazard Map, 4-8%g and 6-10%g. The Hazard Map percentage range illustrates the intensity of earthquake shaking levels and physical disruptions for a given area. Strong shaking occurs at higher percentage levels on the Hazard Map. An area of high shaking levels would have hazard percentages reaching 40% or higher. The Project Area is located within a moderately low-medium shaking level area. In the unlikely event that an earthquake was to occur in this region, the physical impact would be minimal given the shaking level range of Steuben County. The Project's minimal vulnerability to seismic activity and inland location also supports the conclusion that there is a minimal vulnerability to tsunami events within the Project Area.

The final design of the wind turbine foundations will include consideration of the seismic risk of the Project Area.

3.22 Terrestrial Ecology and Wetlands

For the purposes of this PSS, plant, wildlife, and sensitive terrestrial communities have been generally identified based on desktop research and review and also reconnaissance-level field observations conducted in the summer growing season of 2016. Information regarding predetermined impacts to flora, fauna, and communities found within the Project Areas are summarized below.

Plant Communities

The Project Area resides within the Northern (High) Allegheny Plateau ecological region (NYSDEC, 2016). This ecoregion resides along the southern tier of New York and the northern tier of Pennsylvania. A small portion of northwest New Jersey is also included in this large ecoregion. This ecoregion is defined by high elevation features at the northern end of the Appalachian Plateau. Most of this ecoregion is above 1,200 feet and the general land form of the area is mid-elevation hills separated by numerous narrow stream-cut valleys. This ecoregion is over 16.9 million acres in area and has the second highest percentage of natural cover (81%) of any Northeastern ecoregion (Conservation Science Support, 2003). Within the ecoregion, deciduous forest covers 52%; 21% is covered by mixed forests, coniferous forests cover 6%; and only 0.7% of the ecoregion is covered by wetlands. Agricultural uses account for 18% of the total land cover (Conservation Science Support, 2003). Dairy farms are the principle agricultural use with row crops fields limited to the floodplains of river valleys and also tablelands located amongst hilltops. Currently only 1% of the ecoregion is covered by residential and urban development.

More specifically, within this ecoregion, the Project Area resides in the Glaciated Low Allegheny Plateau and the Glaciated Hills sub-ecoregions. The Glaciated Low Allegheny Plateau is a wide-ranging, uniform area which covers much of the Northern Allegheny Plateau of New York. This sub-ecoregion consists of a mosaic of farmland and forestland situated on a low and rolling hillscape. The smooth terrain has been worn through glaciation creating flat hilltops and wide river valleys. Common plant communities alternate between Appalachian oak-pine forest on drier, rocky slopes, and northern hardwoods-conifer forest in ravines, valleys, riparian areas, and on generally moist slopes (Edinger et al., 2014). Most hilltops and river valleys within this plateau have been clear-cut and converted to agriculture while the steeper slopes remain forested.

The Glaciated Allegheny Hills ecoregion has higher elevations on average. These elevation levels are caused by a dominant strata of sandstone and shale which was more resistant to glaciation and weathering events in the past. The Glaciated Allegheny Hills ecoregion is deeply dissected. Soils are known to be stony, acidic, low in fertility, and often found on steep slopes. The soil, climate, and rugged topography make the region more suited to tree growth than agriculture. This is reflected in the ecoregion by being predominantly forested throughout. Hardwood

forests, particularly northern hardwood forest communities, are the most dominant. Appalachian oak forest are also known to occur on more dry or south-facing slopes in the region (Edinger et al., 2014).

The Project Area encompasses approximately 45,500 acres and is composed of predominately deciduous forest and agricultural land. Agricultural areas consists of predominately hay, corn, wheat, and soy crops. Other open fields were maintained for pasture and livestock grazing. Land cover in the Project Area was spatially determined using the Cropland Data Layer (CDL) data set compiled by the United States Department of Agriculture (USDA, 2015). Within this data set, the Project Area is defined to be primarily deciduous forest (61%), agricultural land (22%), and herbaceous grassland (10%) (see Table 5 below). Additionally, the Project Area includes coverages of scrub/shrub (approximately 3%) and developed lands (approximately 3%) to a marginal extent. Lastly, barren land (exposed rock, sand, or clay), open water, and wetland features all comprise less than 1% of the Project Area.

Table 5. Land Cover Types within the Project Area

Cover Type	Acreage	% of Project Area
Forests	27829.48	61
Pasture/Hay	8286.30	18
Grassland/Herbaceous	4554.96	10
Cultivated Crops	1985.09	4
Developed	1524.43	3
Shrub/Scrub	1149.58	2.5
Open Water	102.21	<1
Herbaceous and Woody Wetlands	54.75	<1
Barren Land (Rock/Sand/Clay)	1.40	<1
Total	45488.20	

Site Reconnaissance

Natural plant communities were identified and visually confirmed during a site reconnaissance of the Project Area conducted in the summer of 2016. All plant communities observed during

the field efforts are common in New York State. In accord with the CDL data set, forested land was observed to be the most dominant community type, while successional old field and scrub/shrub communities occur to a smaller extent. Brief descriptions of these main ecological communities encountered are described in more detail below.

Forests within the Project Area are primarily of the hardwood variety and deciduous. The dominant trees include red oak (*Quercus rubra*) and white oak (*Quercus alba*). Mixed with the dominant oaks, at varying densities are quaking aspen (*Populus tremuloides*), sugar maple (*Acer saccharum*), red maple (*Acer rubrum*), white ash (*Fraxinus americana*), shagbark hickory (*Carya ovata*), hop hornbeam (*Ostrya virginiana*), and black cherry (*Prunus serotina*). There are also small incursions of mixed evergreen forests of eastern white pine (*Pinus strobus*) and Eastern hemlock (*Tsuga canadensis*). These mixed evergreen forests appear in ravines, valleys, riparian areas, and on generally moist slopes. Species within the subcanopy layers of saplings, shrubs, and ground layer herbs are very diverse on the Project Site. However in the shrub and sapling layer they mainly include hop hornbeam, witch hazel (*Hamamelis virginiana*), serviceberry (*Amelanchier arborea*), honeysuckle variants (*Lonicera spp.*), choke cherry (*Prunus virginiana*), lowbush blueberries (*Vaccinium angustifolium*, *V. pallidum*), red raspberry (*Rubus idaeus*), gray dogwood (*Cornus racemosa*), and rambler rose (*Rosa multiflora*). Characteristic groundlayer herbs are wild sarsaparilla (*Aralia nudicaulis*), false Solomon's seal (*Maianthemum racemosum*), various sedges (*Carex spp.*), bristly dewberry (*Rubus hispoides*), woodland strawberry (*Fragaria vesca*), black cohosh (*Cimicifuga racemosa*), and wrinkle-leaf goldenrod (*Solidago rugosa*).

Successional shrub land communities located within the Project are also present within the Project Site. Characteristic shrubs found within the Project Area include gray dogwood, raspberries (*Rubus spp.*), serviceberries (*Amelanchier spp.*), choke-cherry, willows (*Salix spp.*), stag-horn sumac (*Rhus typhina*), nanny berry (*Viburnum lentago*), buckthorns (*Rhamnus spp.*), rambler rose, honey suckles, and various hawthorns (*Crataegus spp.*).

Successional old-fields are meadows dominated by forbs and grasses which propagate areas what have been cleared and plowed for farming or development in the past, but have since been abandoned. Some fields within the Project Area appear to be mowed at sporadic intervals. Such action favors the reproduction of characteristic successional old field species. Characteristic herbs include goldenrods (*Solidago spp.*), bluegrasses (*Poa spp.*), timothy (*Phleum pratense*), reed canary grass (*Phalaris arundinacea*), sedges, common dandelion (*Taraxacum officinale*), old field cinquefoil (*Potentilla simplex*), asters (*Symphyotrichum spp.*), and black-eyed-susan (*Rudbeckia hirta*).

The various plant communities found within the Project Area which may be disturbed during construction will be summarized in more detail within Exhibit 22 of the Application. Figures depicting aerial imagery of the Project Area and the expected limits of disturbance to the specific plant communities will be provided.

Natural Communities or Habitats of Special Concern

Through reference to online resources associated with the USFWS Environmental Conservation Online System (ECOS), NYSDEC Environmental Resource Mapper, and the U.S. National Wilderness Preservation System Mapper, there are no known significant natural communities or habitats of special concern which are located within the Project Area. As such, the Applicant does not anticipate the impact of any Federal or State-listed significant natural community, habitat of special concern, U.S. National Wilderness Area, or USFWS-Critical Wildlife Habitat.

Although no impact to the aforementioned areas are proposed to occur within the Project Area, this Exhibit will describe any indirect impacts the Project may have on these distinctive communities.

Amphibian and Reptile Impacts

Access to common reptile and amphibian species ranges in the State of New York is provided through use of the publically available “Amphibian and Reptile Atlas Project” (Herp Atlas Project) provided by the NYSDEC.

The Herp Atlas Project was a 10-year survey that displayed results of approximately 70 species of amphibians and reptiles in New York State. The unit of measurement for collecting Atlas data is the USGS 7.5 minute topographic quadrangle. Based on the Amphibian and Reptile Atlas Project distribution maps provided by the NYSDEC, a range of reptile and amphibian species have been identified as occurring within the USGS 7.5 minute topographic quadrangles associated with the Project Area. Species that may be found occurring within the Project Area include:

- Spotted salamander
- Red-spotted newt
- Northern dusky salamander
- Allegany mountain dusky salamander
- Northern redback salamander
- Northern slimy salamander
- Wehrle’s salamander
- Northern spring salamander
- Northern two-lined salamander
- Eastern American toad
- Northern spring peeper
- Bull frog
- Green frog
- Wood frog
- Northern leopard frog
- Pickerel frog
- Shorthead Garter Snake
- Common Garter Snake
- Northern Redbelly Snake
- Northern Water Snake
- Smooth Green Snake
- Eastern Milk Snake
- Northern Ringneck Snake
- Common snapping turtle
- Painted turtle

Within the Application, the Applicant will describe all potential direct and indirect impacts to the aforementioned reptile and amphibian species, including any potential mitigation and avoidance measures which will be undertaken to avoid significant impacts to reptiles and amphibians as a result of the Project.

Mammals

Access to common mammal species ranges in the Northeastern United States is under-developed and not readily available to the public. However, the plant communities which support large mammals like whitetail deer, black bear, coyotes, red fox, gray fox, raccoon, beaver, porcupine, and opossum, and a range of small mammals such as woodchuck, chipmunk, cottontail rabbit, gray squirrel, red squirrel, various mice, voles, shrew, and moles exist in the Project Area. Impacts to bat species will be discussed in more detail below.

Within the Application, the Applicant will describe all potential direct and indirect impacts to unlisted mammal species, including any potential mitigation and avoidance measures which will be undertaken to avoid significant impacts to mammals as a result of the Project.

Bat Impacts

Due to the nature of the wind turbines, the Project may present a collision risk to any bats which migrate or reside in close proximity to the proposed turbine locations. Secondly, Project construction operations in the form of scrubland and forest clearing may also pose a risk to any summer roosting habitat for local bat species.

To specifically assess bat presence and habitat within the Project Area, the Applicant is conducting on-site acoustic monitoring surveys in the summer and fall of 2016 (please see Figure 11 for monitoring locations and Appendix J for study work plan). Stantec Consulting is conducting the monitoring on behalf of the Applicant. Based on the results of these studies, and in conjunction with standard wind farm practices, the Applicant will provide an assessment of the types of impacts that may be subjected to bat species as a result of this Project. Included in this segment, will be a discussion on specific conservation measures the Applicant will adhere to in order to minimize incidental take and decrease the potential for adverse impacts to bats during the construction and operations phase of this Project.

Avian Impacts

Much like the aforementioned bats, the Project may also cause some impact to birds by altering the habitat, displacing resident birds from nests and roosts, and by presenting a collision risk to migrating and resident birds. To assess use of the Project Area by avian species and the Project's potential impact, the Applicant conducted a series of avian surveys (also provided by Stantec). These studies include, raptor point counts, migratory songbird

counts, breeding bird surveys, and raptor nest searches (see Figure 11 for field survey locations and Appendix K for study work plan).

In conjunction with the field survey, desktop analysis of avian species presence within the Project Area was also documented.

Migratory Birds and Eagles

The USFWS IPaC report lists 16 species of migratory birds, including the bald eagle (*Haliaeetus leucocephalus*) and short-eared owl (*Asio flammeus*), which could potentially be affected by activities within the Project Site. Table 6 provides a summary of species that could potentially occur in the based on existing site conditions, species habitat requirements, and seasonal utilization.

Table 6. Migratory Bird Habitat Assessment

Species	Habitat Requirements	Seasonal Habitat Utilization	Suitable Habitat in Study Area?
Birds			
American bittern (<i>Botaurus lentiginosus</i>)	Freshwater wetlands with areas of open water and tall, dense vegetation is optimal habitat. (USFWS 2015)	Breeding (None Specified)	Potential – There is likely large wetland systems present within the Study Area. Furthermore, extensive manipulation (agricultural) creates unsuitable ecosystems.
Bald eagle (<i>Haliaeetus leucocephalus</i>)	Large bodies of open water and/or substantial wetland habitats supporting an abundance of fish species. (USFWS 2015)	Year round	Potential – Open water or wetland ecosystems present within the Study Area.

Species	Habitat Requirements	Seasonal Habitat Utilization	Suitable Habitat in Study Area?
Black-billed cuckoo (<i>Coccyzus erythrophthalmus</i>)	Dense wooded habitats (deciduous or mixed deciduous-coniferous woods) along edges of bogs and marshes or other types of open water. (USFWS 2015)	Breeding (None Specified)	Potential – There may be wooded areas within the Study Area, where portions of forest meet bog or marsh-like systems.
Blue-winged warbler (<i>Vermivora pinus</i>)	Successional fields with a combination of shrubby and open areas, commonly abandoned farmlands. (NYSDEC 2015)	Breeding (April to May)	Potential – If areas along agricultural fields show vegetation consistent with early succession.
Canada warbler (<i>Wilsonia canadensis</i>)	Cool, moist, deciduous and mixed forests that have a dense, well-established shrub understory. (USFWS 2001)	Breeding (Mid-May to late July)	Potential – Deciduous woodland ecosystems occur, field survey may reveal the state of the understory, and therefore if occurrence of this species is likely.
Golden-winged warbler (<i>Vermivora chrysoptera</i>)	Deciduous woodland, usually in dry uplands or areas of thick undergrowth. (NYNHP 2015)	Breeding (April and May)	Potential – Deciduous woodland habitat occurs throughout a portion of the Study Area.

Species	Habitat Requirements	Seasonal Habitat Utilization	Suitable Habitat in Study Area?
Least Bittern (<i>Lxobrychus exilis</i>)	Areas of freshwater marshes and ponds often with thick vegetation, and occasionally in salt marsh or mangroves. (Audubon 2016; NYNHP 2015)	Breeding (May through July)	Potential – Suitable habitat is present; freshwater marshes and ponds.
Louisiana Waterthrush (<i>Parkesia motacilla</i>)	Thickets with swampy or wet woods, streamsides, and lake shores. (Audubon 2016)	Breeding (None specified)	Potential – There may be wet wooded areas containing thickets within the Project Site.
Peregrine falcon (<i>Falco peregrinus</i>)	No restrictions on habitat, highly adaptable species. (USFWS 2015)	Breeding (None specified)	Potential – Species inhabits an array of ecosystems, those within the Project Area may be suitable.
Pied-billed grebe (<i>Podilymbus podiceps</i>)	Systems with open water, such as ponds or lakes, and heavily vegetated marshes or wetlands. (Audubon 2016)	Breeding (None specified)	Potential – There may be marsh areas or open waterbodies with substantial vegetation within the Project Area.

Species	Habitat Requirements	Seasonal Habitat Utilization	Suitable Habitat in Study Area?
Prairie warbler (<i>Dendroica discolor</i>)	Shrubby pastures, dry old clearings, edges of forest with undergrowth of scrub oaks, especially on ends of slopes and ridges. Likes thick second-growth of hickory, dogwood, hazel, or laurel with blackberry vines. (Audubon 2016)	Breeding (None specified)	Potential – If agricultural fields are no longer utilized or forested areas contain undergrowth.
Red-headed woodpecker (<i>Melanerpes erythrocephalus</i>)	Farm country (agricultural fields and orchards) shade trees in towns, large scattered trees, forest edges, open pine woods, groves of tall trees. (Audubon 2016)	Breeding (April through August; primarily May and June)	Potential – Suitable habitat is present between forested areas and the numerous open land/agricultural fields.
Short-eared owl (<i>Asio flammeus</i>)	Large areas of open grasslands, prairies, or hayfields. (USFWS 2015)	Wintering	Potential – Suitable habitat is present; agricultural fields.
Willow flycatcher (<i>Empidonax traillii</i>)	Clearings and early successional growth habitats, and occasional shrubby areas, often with standing or running water. (USFWS 2015)	Breeding (None specified)	Potential – Ample clearings present, if areas contain early successional growth suitable habitat may be present.

Species	Habitat Requirements	Seasonal Habitat Utilization	Suitable Habitat in Study Area?
Wood thrush (<i>Hylocichla mustelina</i>)	Mainly in the understory of deciduous woodlands. More common in damp forest and near streams than in drier woods. (Audubon 2016)	Breeding (None specified)	Potential – Deciduous forested comprises various portions of the Project Area.

NYS Breeding Bird Atlas

The DEC Breeding Bird Atlas (BBA) statewide survey resource was used to identify any bird species that breed within the Project Area. A BBA GoogleEarth dataset provided a detailed distribution of bird species located within specific survey blocks inside the Project Area. Table 7 provides a compiled list of all species found to breed within the Project Area based on these survey block results. To supplement this resource, the national Christmas Bird Count was used to contribute to data that outlines the nature of the Project Area. In the current year 2016, 2503 bird counts have been completed and 28846081 birds have been counted.

Table 7. NYS Breeding Bird Atlas Species Located within the Project Area

Swans, Geese, & Ducks (<i>Anatidae</i>)	Partridges, Grouse, & Turkeys (<i>Phasianidae</i>)	Bitterns, Herons, & Allies (<i>Ardeidae</i>)
<ul style="list-style-type: none"> Canada Goose (<i>Branta canadensis</i>) Wood Duck (<i>Aix sponsa</i>) Mallard (<i>Anas platyrhynchos</i>) Hooded Merganser (<i>Lophodytes cucullatus</i>) 	<ul style="list-style-type: none"> Ring-necked Pheasant (<i>Phasianus colchicus</i>) Ruffed Grouse (<i>Bonasa umbellus</i>) Wild Turkey (<i>Meleagris gallopavo</i>) 	<ul style="list-style-type: none"> Great Blue Heron (<i>Ardea herodias</i>) Green Heron (<i>Butorides virescens</i>)
Vultures (<i>Cathartidae</i>)	Kites, Eagles, Hawks, & Allies (<i>Accipitridae</i>)	Caracaras & Falcons (<i>Falconidae</i>)
<ul style="list-style-type: none"> Turkey Vulture (<i>Cathartes aura</i>) 	<ul style="list-style-type: none"> Northern Harrier (<i>Circus cyaneus</i>) Sharp-shinned Hawk (<i>Accipiter striatus</i>) Cooper's Hawk (<i>Accipiter</i>) 	<ul style="list-style-type: none"> American Kestrel (<i>Falco sparverius</i>)

	<p><i>cooperii</i>)</p> <ul style="list-style-type: none"> Northern Goshawk (<i>Accipiter gentilis</i>) Red-shouldered Hawk (<i>Buteo lineatus</i>) Broad-winged Hawk (<i>Buteo platypterus</i>) Red-tailed Hawk (<i>Buteo jamaicensis</i>) 	
Plovers & Lapwings (Charadriidae)	Sandpipers, Phalaropes, & Allies (Scolopacidae)	Pigeons & Doves (Columbidae)
<ul style="list-style-type: none"> Kildeer (<i>Charadrius vociferous</i>) 	<ul style="list-style-type: none"> American Woodcock (<i>Scolopax minor</i>) 	<ul style="list-style-type: none"> Rock Pigeon (<i>Columba livia</i>) Mourning Dove (<i>Zenaida macroura</i>)
Cuckoos, Roadrunners, & Anis (Cuculidae)	Swifts (Apodidae)	Hummingbirds (Trochilidae)
<ul style="list-style-type: none"> Black-billed Cuckoo (<i>Coccyzus erythrophthalmus</i>) Yellow-billed Cuckoo (<i>Coccyzus americanus</i>) 	<ul style="list-style-type: none"> Chimney Swift (<i>Chaetura pelagica</i>) 	<ul style="list-style-type: none"> Ruby-throated Hummingbird (<i>Archilochus colubris</i>)
Kingfishers (Alcedinidae)	Woodpeckers & Allies (Picidae)	Tyrant Flycatchers (Tyrannidae)
<ul style="list-style-type: none"> Belted Kingfisher (<i>Megaceryle alcyon</i>) 	<ul style="list-style-type: none"> Red-bellied Wood pecker (<i>Melanerpes carolinus</i>) Yellow-bellied Sapsucker (<i>Sphyrapicus varius</i>) Downy Woodpecker (<i>Picoides pubescens</i>) Hairy Woodpecker (<i>Picoides villosus</i>) Northern Flicker (<i>Colaptes auratus</i>) Pileated Woodpecker (<i>Dryocopus pileatus</i>) 	<ul style="list-style-type: none"> Eastern Wood-Pewee (<i>Contopus virens</i>) Alen Flycatcher (<i>Empidonax alnorum</i>) Willow Flycatcher (<i>Empidonax traillii</i>) Least Flycatcher (<i>Empidonax minimus</i>) Eastern Phoebe (<i>Sayornis phoebe</i>) Great Crested Flycatcher (<i>Myiarchus crinitus</i>) Eastern Kingbird (<i>Tyrannus tyrannus</i>)

Vireos (<i>Vireonidae</i>)	Jays, Magpies, & Crows (<i>Corvidae</i>)	Larks (<i>Alaudidae</i>)
<ul style="list-style-type: none"> • Yellow-throated Vireo (<i>Vireo flavifrons</i>) • Blue-headed Vireo (<i>Vireo solitarius</i>) • Warbling Vireo (<i>Vireo olivaceus</i>) 	<ul style="list-style-type: none"> • Blue Jay (<i>Cyanocitta cristata</i>) • American Crow (<i>Corvus brachyrhynchos</i>) • Common Raven (<i>Corvus corax</i>) 	<ul style="list-style-type: none"> • Horned Lark (<i>Eremophila alpestris</i>)
Swallow (<i>Hirundinidae</i>)	Chickadees & Titmice (<i>Paridae</i>)	Nuthatches (<i>Sittidae</i>)
<ul style="list-style-type: none"> • Tree Swallow (<i>Tachycineta bicolor</i>) • Northern Rough-winged Swallow (<i>Stelgidopteryx serripennis</i>) • Bank Swallow (<i>Riparia riparia</i>) • Cliff Swallow (<i>Petrochelidon pyrrhonota</i>) • Barn Swallow (<i>Hirundo rustica</i>) 	<ul style="list-style-type: none"> • Black-capped Chickadee (<i>Poecile atricapillus</i>) • Tufted Titmouse (<i>Baeolophus bicolor</i>) 	<ul style="list-style-type: none"> • Red-breasted Nuthatch (<i>Sitta canadensis</i>) • White-breasted Nuthatch (<i>Sitta carolinensis</i>)
Creepers (<i>Certhiidae</i>)	Wrens (<i>Troglodytidae</i>)	Kinglets (<i>Regulidae</i>)
<ul style="list-style-type: none"> • Brown Creeper (<i>Certhia americana</i>) 	<ul style="list-style-type: none"> • Carolina Wren (<i>Thryothorus ludovicianus</i>) • House Wren (<i>Troglodytes aedon</i>) 	<ul style="list-style-type: none"> • Golden-crowned Kinglet (<i>Regulus satrapa</i>)
Old World Warblers & Gnatcatchers (<i>Sylviidae</i>)	Thrushes (<i>Turdidae</i>)	Mockingbirds, Thrashers, & Allies (<i>Mimidae</i>)
<ul style="list-style-type: none"> • Blue-gray Gnatcatcher (<i>Poliioptila caerulea</i>) 	<ul style="list-style-type: none"> • Eastern Bluebird (<i>Sialia sialis</i>) • Veery (<i>Catharus fuscescens</i>) • Hermit Thrush (<i>Catharus guttatus</i>) • Wood Thrush (<i>Hylocichla mustelina</i>) • American Robin (<i>Turdus migratorius</i>) 	<ul style="list-style-type: none"> • Gray Catbird (<i>Dumetella carolinensis</i>) • Northern Mockingbird (<i>Mimus polyglottos</i>) • Brown Thrasher (<i>Toxostoma rufum</i>)

Starlings & Allies (<i>Sturnidae</i>)	Waxwings (<i>Bombycillidae</i>)	Wood Warblers (<i>Parulidae</i>)
<ul style="list-style-type: none"> • European Starling (<i>Sturnus vulgaris</i>) 	<ul style="list-style-type: none"> • Cedar Waxwing (<i>Bombycilla cedrorum</i>) 	<ul style="list-style-type: none"> • Blue-winged Warbler (<i>Vermivora pinus</i>) • Lawrence’s Warbler (<i>Vermivora chrysoptera</i> x <i>V. pinus</i>) • Nashville Warbler (<i>Vermivora ruficapilla</i>) • Yellow Warbler (<i>Dendroica petechia</i>) • Chestnut-sided Warbler (<i>Dendroica pensylvanica</i>) • Magnolia Warbler (<i>Dendroica magnolia</i>) • Black-throated Blue Warbler (<i>Dendroica virens</i>) • Blackburnian Warbler (<i>Dendroica fusca</i>) • Prairie Warbler (<i>Dendroica discolor</i>) • Black-and-white Warbler (<i>Mniotilta varia</i>) • American Redstart (<i>Setophaga ruticilla</i>) • Ovenbird (<i>Seiurus aurocapilla</i>) • Louisiana Waterthrush (<i>Seiurus motacilla</i>) • Mourning Warbler (<i>Oporornis philadelphia</i>)

		<ul style="list-style-type: none"> • Common Yellowthroat (<i>Geothlypis trichas</i>) • Hooded Warbler (<i>Wilsonia crinita</i>) • Canada Warbler (<i>Wilsonia canadensis</i>)
Tanagers (<i>Thraupidae</i>)	Towhees, Buntings, Sparrows, & Allies (<i>Emberizidae</i>)	Grosbeaks & Buntings (<i>Cardinalidae</i>)
<ul style="list-style-type: none"> • Scarlet Tanager (<i>Piranga olivacea</i>) 	<ul style="list-style-type: none"> • Eastern Towhee (<i>Pipilo erythrophthalmus</i>) • Chipping Sparrow (<i>Spizella passerina</i>) • Field Sparrow (<i>Spizella pusilla</i>) • Savannah Sparrow (<i>Passerculus sandwichensis</i>) • Grasshopper Sparrow (<i>Ammodramus savannarum</i>) • Song Sparrow (<i>Melospiza melodia</i>) • Swamp Sparrow (<i>Melospiza georgiana</i>) • Dark-eyed Junco (<i>Junco hyemalis</i>) 	<ul style="list-style-type: none"> • Northern Cardinal (<i>Cardinalis cardinalis</i>) • Rose-breasted Grosbeak (<i>Phoebastria ludovicianus</i>) • Indigo Bunting (<i>Passerina cyanea</i>)
Blackbirds (<i>Icteridae</i>)	Finches (<i>Fringillidae</i>)	Old World Sparrows (<i>Passeridae</i>)
<ul style="list-style-type: none"> • Bobolink (<i>Dolichonyx oryzivorus</i>) • Red-winged Blackbird (<i>Agelaius phoeniceus</i>) • Eastern Meadowlark (<i>Sturnella magna</i>) • Common Grackle (<i>Quiscalus quiscula</i>) • Brown-headed Cowbird (<i>Molothrus ater</i>) • Baltimore Oriole (<i>Icterus galbula</i>) 	<ul style="list-style-type: none"> • Purple Finch (<i>Carpodacus purpureus</i>) • House Finch (<i>Carpodacus mexicanus</i>) • American Goldfinch (<i>Carduelis tristis</i>) 	<ul style="list-style-type: none"> • House Sparrow (<i>Passer domesticus</i>)

In the Article 10 Application, the Applicant will provide summaries of the reports of the on-site bird surveys conducted by Stantec. The standalone Stantec report will also be provided as an Appendix. In conjunction with the summaries will be a discussion on the potential impacts of the Project on bird species, including potential displacement and collision impacts and chosen methods of mitigating and reducing these potential impacts.

Post-Construction Bird and Bat Monitoring

Based on Stantec's findings, the Applicant will coordinate with the NYSDEC and USFWS to develop a post-construction bird and bat mortality monitoring program. The Article 10 Application will provide details associated with this program assessing direct and indirect impacts of the wind facility on avian and bat species and potential post-construction opportunities to aid in the restoration of populations to pre-existing conditions.

Threatened and Endangered Species

State Listed Threatened and Endangered Species

The New York State Department of Environmental Conservation (NYSDEC) Environmental Resource Mapper was consulted as a first step in determining the presence of rare or state listed animals or plants, significant natural communities, or other significant habitats in the immediate vicinity of the Project. The results of the search revealed no potential presence of "Rare Plants and Rare Animals" in the surrounding area of the Project.

However, in consultation with the New York Natural Heritage Program (NYNHP), it was determined that two threatened bird species were previously documented within the Project Site. They are the Northern Harrier (*Circus cyaneus*) and Henslow's Sparrow (*Ammodramus henslowii*).

Northern Harrier

Northern Harriers are listed as threatened in New York. This medium-sized raptor is known for its long, broad wings and a rounded tail. They also have distinctive owl-like facial features with a small hooked bill. Males of this species are gray above and whitish below with black wingtips and a black-banded tail. Females and immatures are brown, with black bands on the tail. This raptor is known to breed on moorland, bogs, prairies, farmland prairies, marshes, grasslands, swamps and other assorted open areas.

Historically, populations of Northern Harriers were considered abundant and widespread. However, significant declines began to occur in the 1950's due to loss of breeding habitat and adverse effects of widespread pesticide use. Reforestation, the filling in of wetlands, and development have also contributed to significant habitat losses.

Henslow's Sparrow

Henslow's Sparrow is also listed as threatened in the State of New York. This species of sparrow has streaked brown upperparts with a light brown breast, and a white belly and throat. This species is known for an olive face and neck, rust-colored wings and a short dark forked tail. This sparrow is found within moist old fields and meadows. Breeding areas are very variable, but generally require tall, dense grass and herbaceous vegetation. Breeding areas are described as upland weedy hayfields, shrub-less pasture land, and wet meadows. These birds are also known to use lightly grazed pastures.

The major threat to Henslow's sparrow is loss of breeding habitat as agricultural grasslands are developed or abandoned to subsequently revert to forests. In the early 1900s, Henslow's sparrows were uncommon and rare in all parts of New York State. Populations increased from 1920 to 1940, with several new colonies appearing throughout the state. However, populations began to decline again in the 1950s. Breeding Bird Survey data through 1989 have shown a steady, statistically significant declining trend in New York State and throughout the Northeast. More specifically, in New York State, this species was listed as a Species of Special Concern since the early 1980's until it was re-classified as threatened in 1999 due to a steady decline in population.

Within Exhibit 22 of the application, the Applicant will identify habitat in the Project Area that could reasonably be expected to support the northern harrier and Henslow's sparrow. The Exhibit will discuss the potential Project impacts to the identified species and measures which will be taken in order mitigate any adverse impacts to these threatened bird species.

Federally Listed Threatened and Endangered Species

Initial contact has been made with the United State Fish and Wildlife Service (USFWS) to discuss conservation measures and evaluate potential impacts to species identified within the Project Area. The USFWS Information for Planning and Conservation (IPaC) resource was used to identify any threatened or endangered species, critical habitats, migratory birds or other natural resources that may be located within the vicinity of the Project Site (see Appendix L).

Northern Long-eared Bat

The USFWS IPaC Trust Resource Report listed one (1) species that may be located within the vicinity of the Project which was the northern long-eared bat (*Myotis septentrionalis*). The northern long-eared bat is both a State and federally-listed threatened species.

The northern long-eared bat is a small bat, measuring an average of approximately three inches in total length. Adults weigh between five and eight grams. The fur and wing

membranes are light brown in color. Compared to other *Myotis* species, these bats have long ears, which is what gives this species its common name.

During the spring and summer months, northern long-eared bats spend the day roosting in trees or artificial structures, switching to a new roost every other day on average. Roost trees are defined as any tree with over three inches diameter at breast height (DBH). More specifically, typical roost trees also contain cracks, crevices, or hollows which enable the bat to roost during the daylight hours. Most roost trees are either dead, desiccated, or contain deep furrows, hollows, or peeling bark to allow for effective roosting. In the fall, northern long-eared bats migrate to caves to hibernate over the winter months. This species typically hibernates together with much larger numbers of bats of other species, although hibernating groups of northern long-eared bats still number in the hundreds. Due to the spread of white-nose syndrome within hibernacula and this species sharing behavior hibernacula, vast numbers of northern long-eared bats (from hibernacula counts) have declined by up to 99 percent in the Northeast causing it to be listed federally as a threatened species (USFWS, 2016).

Under the USFWS Northern Long-Eared Bat Final 4(d) Rule, incidental take is prohibited under the following scenarios: take occurring within a known hibernacula as a result of tree clearing, or within 0.25 miles of a known occupied hibernacula, or within 150 feet of a known and occupied maternity roost from 1 June to 31 July.

Given the general requirements for summer roosting habitat for this species, forested portions impacted by Project components have the potential to impact summer roosting habitat for this species. Within Exhibit 22 of the Application, the Applicant will identify habitat in the Project Area that could reasonably be expected to support the northern long-eared bat. The Exhibit will discuss all potential Project impacts to this bat species and potential measures to take in order to avoid and minimize incidental take or any such impacts during the construction and operations phase of this Project.

Wetland Mapping and Designated Functions and Values

Wetland and stream delineations will be conducted in the growing season of 2016 within the portions of the Project Area impacted by wind turbine foundations, work areas, laydown and staging areas, substation, O&M building, access roads and collection lines. The determination of wetland boundaries will be made according to the three (3)-parameter methodology described in the U.S. Army Corps of Engineers (“USACE”) Wetland Delineation Manual (Environmental Laboratory, 1987), and further described by the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeastern Region (USACE, 2012). Wetland boundaries will be defined in the field by sequentially numbered surveyor’s flagging marked “wetland delineation”, which will be

located using Global Positioning System (“GPS”) technology with reported sub-meter accuracy.

On-site wetland delineations and desktop analyses are supported by existing databases of state-mapped and federally-mapped wetlands.

Review of NYSDEC Freshwater Wetland mapping indicates that 12 state-regulated wetlands occur within the Project Area. Table 8 (below) provides a summary of these wetlands. All State-regulated wetlands are entirely encompassed within the Project Area. Please see Figure 12 for a depiction of all state-mapped wetlands within the Project Area.

Table 8. NYSDEC Regulated Wetlands within the Project Area

Town	NYSDEC Wetland ID	Acreage	Wetland Class (I-IV)
West Union	RX-1	53.1	II
West Union	RX-2	93.0	II
West Union	RX-3	34.1	II
West Union	RX-4	53.2	II
West Union	RX-5	69.4	III
West Union	RX-6	38.4	III
West Union	RX-7	14.9	II

National Wetland Inventory (“NWI”) mapping includes wetland communities within the Project Area, totaling approximately 450 acres (see Figure 12). The NWI data indicate that freshwater forested/shrub wetlands comprise the majority of wetland communities on-site, totaling approximately 234 acres. Other NWI-mapped wetland communities on-site include freshwater emergent wetlands (96 acres), and freshwater ponds (119 acres) (NWI, 2015).

The characteristics of all field-delineated wetlands will be described in the Article 10 Application and a standalone Wetland and Waterbody Report, which will also include a summary of the field data collected regarding wetland vegetation, soils, hydrology, Cowardin classification, and jurisdictional status. The Delineation Report will be prepared with a presumption that it will be included as an Appendix to the Article 10 Application.

Additionally, Eight Point Wind will conduct a wetland functions and values assessment based on the methodology described in the Wetlands Functions and Values: Descriptive Approach in the September 1999 supplement to The Highway Methodology Workbook (Supplement) by the New England Division of the USACE (USACE, 1999). During each delineation as part of the data collection effort, biologists will document the function and values of each wetland based off of pre-determined categories described in greater detail in the aforementioned methodology.

For each wetland, wetland biologists will identify the observed vegetation, hydrologic conditions, adjacent area, size of the wetland system, nutrient transport, general ecology, and the availability of public access and education. These observations will serve as the basis for assigning qualitative primary functions and values of each wetland on-site. Functions and values that may be assigned will be identified in the Article 10 Regulations and include groundwater recharge/discharge, fish and shellfish habitat, protected species habitat, sediment/toxicant retention, nutrient removal/retention/transformation, sediment/shoreline stabilization, wildlife habitat, recreation, uniqueness/heritage, and visual quality/aesthetics.

Wetland Impacts

The development and use of temporary access roads and temporary workspaces around turbines will result only in temporary impacts to wetlands and streams. The installation of above-ground or buried electrical lines require clearing of vegetation and soil disturbance which may also cause temporary disturbance during the construction phase. Indirect impacts to wetlands and surface waters may result from sedimentation and erosion caused by adjacent construction activities to effect waterbodies downstream.

Currently, the Project is still in the design phase. The Applicant is planning to minimize wetland and waterbody impacts where attainable, through measures such as:

- Siting wind turbines, access roads, and collection lines to avoid wetlands where feasible,
- Adhering to a practice of avoiding trenching or use of heavy equipment in waterbodies,
- Restoring temporarily impacted wetlands and waterbodies to pre-construction conditions,
- Implementing a SWPPP to minimize impacts to wetlands during construction, and
- Implementing a spill prevention and response plan and utilizing a buffer system around wetlands.

The Article 10 Application will quantify both temporary and permanent impacts to wetlands as a result of the construction phase of the Project. Furthermore, the Application will discuss measures that will be implemented during construction to avoid and/or mitigate any impacts to wetland resources.

Invasive Species Management

A generated list of all pre-existing invasive plant species observed and documented during field investigations (within the anticipated limits of disturbance only) will be provided in the Application. Correspondingly, a figure set will also be provided depicting the location of invasive species found to currently exist and an approximate size of populations noted within the survey corridor. This data will serve as a foundation to operations and logistics during the construction phase of the Project in order to avoid any current large invasive populations and also quantify any new spread of invasive species as a result of construction.

Currently, the Applicant does not plan to conduct large scale transportation of fill material to, or within, the Project Area. As such, the potential to spread invasive species by this mechanism is presumed to be nominal for this Project. If transported fill is deemed necessary, the Applicant will require all contractors to assure that all imported fill is free of invasive species prior to use. Furthermore, it is not currently anticipated that fill will need to be transported off the Site. Remnant stockpiled materials are planned to be spread during the restoration effort.

Invasive species have also been known to spread through other vectors such as construction vehicles and equipment. In order to moderate this vector, the Article 10 Application will include an Invasive Species Management Plan (ISMP), which will include measures to educate workers, minimize the risk of imported fill introducing invasive species, clean equipment effectively, develop site grading plans and erosion and sediment control plans that help minimize the chance of spreading of invasive, and also establish a monitoring regime for invasive species spread post-construction.

Agricultural Resource Impacts

To minimize Project impacts to active agricultural land the Applicant plans to coordinate with the New York State Department of Agriculture and Markets (NYSDAM) and adhere to the provided *Guidelines for Agricultural Mitigation for Windpower Projects*. Agricultural land will be temporarily and permanently impacted by Project construction. Impacts will be generally due to excavation and backfilling of operation facilities, creation of access roads, placement of turbine foundations, and buried electrical interconnect. Agricultural construction and restoration measures to minimize long term impacts to agricultural areas will be described in the Article 10 Application.

The presence of agricultural land within the Project Area will be determined based on site-specific field investigations and review of aerial imagery. The type of agricultural use (*e.g.*, row crops, hayfields, pasture land) will also be documented in the Article 10 Application. Impacts to agricultural land will be described as temporary or permanent impacts and will be calculated via GIS software. Mitigation protocols post-construction will also adhere to guidelines set forth by NYSDAM.

3.23 Aquatic Ecology and Water Resources

Exhibit 23 of the Application will include a study of facility impacts to surface water resources, groundwater resources, and associated aquatic ecologies. The study will involve a summary and mapping of existing conditions, an in-depth impact analysis of the facility, and a discussion outlining impact avoidance and mitigation measures undertaken by the Applicant.

Groundwater

In the Project Area, the average depth to the water table for soils listed is approximately 60 centimeters (cm). The average depth to bedrock is approximately 130 cm (USDA NRCS, 2016). Based on *“Unconsolidated Aquifers in Upstate New York”*, a map obtained through the New York State Department of Environmental Conservation (NYSDEC), there is one unconsolidated groundwater aquifer in the southwest corner of the Project Area. This aquifer is located in the river valley of Marsh Creek and recharges at 10 to 100 gallons per minute. Additionally, another unconsolidated aquifer lies northeast and adjacent to (but outside of) the Project Area near the Town of Greenwood. This aquifer recharges at a rate of over 100 gallons per minute and is associated with the Bennetts Creek river valley (see Figure 13).

Within the Application, individual site maps will be provided depicting depths to high groundwater, depth to bedrock, groundwater aquifers, and groundwater recharge areas for the entire Project Area. Groundwater aquifer maps will also depict groundwater flow direction, groundwater quality, groundwater well locations, and associated exclusion zones where information is readily available. These maps will be based on information gathered from the NYSDEC Division of Water Resources, Bureau of Water Management, USGS Office of Groundwater, USDA Soil Conservation Service, Soil Survey of Steuben County, the USDA NRCS Web Soil Survey online resource, and information gathered through research and outreach from the Applicant.

To explicitly identify all water wells within the Project Area, the Applicant will contact the Steuben County Department of Health and NYSDEC to request access to all publicly available water well information. Well survey requests will also be sent to all residences and businesses within the Project area. A map depicting the locations of all private and public wells obtained will be provided in the Article 10 Application, along with a table depicting the characteristics of each well (depth, yield) when this information is readily available and/or provided to the Applicant. Preliminary identification of currently mapped water wells are provided in Figure 14.

The proposed turbines will be located in higher elevation uplands, above and outside of the aquifer footprints located in the valleys. Excavations for foundations, roadways, and

underground collector lines are expected to be relatively shallow, and are not anticipated to intercept groundwater within the surrounding aquifers. Turbines will be setback from residences, and therefore the majority of earthwork activities are generally not planned to occur in close proximity to residential drinking water wells. Additionally, construction of the Project will adhere to a Spill Prevention Control and Countermeasure (SPCC) plan and a SWPPP to prevent contamination and/or erosion due to surface runoff, thereby avoiding significant adverse impacts.

The Project will add only small areas of impervious surface, which will be dispersed throughout the Project Area, and will have a negligible effect on groundwater recharge based on experience with other operating wind farms in New York State. An analysis will be provided in the Article 10 Application summarizing potential impacts to public and private drinking water supplies, groundwater quality, and associated aquifers within one mile from the Project Area. Analyses will address impacts which could occur from Project construction including effects arising from anticipated dewatering areas (if necessary) and also operation of the facility during both nominal and extreme (drought) conditions.

The Application will identify the nearest surface water drinking supply intake relative to the Project Area. If the nearest intake is not located within one mile, the nearest downstream surface water drinking supply intake will be provided. An analysis of any potential impacts to drinking water supplies due to construction or operations of the Project will be included in the Article 10 Application including characterization of the type, nature, and extent of service provided from the identified source.

Surface Water

Through use of data sets obtained from NYSDEC, ESRI, Steuben County, and streams identified during the on-site wetland delineation effort, a map will be provided depicting surface waters located within the Project Area. Contemporary locations of intermittent streams will also be included in the map when they are encountered by field staff during the on-site delineation effort, or when their locations are made known through publicly available resources.

The Project Area is located within both the Chemung River and Genesee River major drainage basins of New York. According to the NYSDEC, the Chemung River drainage basin covers an area of 2,600 square miles along the border of New York and Pennsylvania. A majority of Steuben County is covered by this basin. The Chemung River flows across the western section of the Southern Tier of New York before its confluence with the Susquehanna River, which ultimately empties into the Chesapeake Bay. Water quality measurements in the New York portion of the Chemung River Watershed are classified as satisfactory. However, aquatic weed growth and invasive species influxes have caused

impacts to some of the larger lakes in the watershed. Various nonpoint source pollutions from farms are the most frequently cited source of impacts due to the mostly rural setting.

The Genesee River drainage basin is found almost entirely within New York State. Only 15 miles of the river and its tributaries originate in the Allegheny Plateau of Northern Pennsylvania. The river flows north for approximately 140 miles before emptying into Lake Ontario within the vicinity of the City of Rochester. Water quality measurements in the Genesee River Watershed are found to be also generally satisfactory. Water quality concerns in the watershed are mostly associated with urban and industrial point source pollution in the vicinity of Rochester. Agriculture and other nonpoint sources become more pronounced within the largely rural areas heading southward towards the Project Area.

Within the Chemung River drainage basin, the Project specifically occupies the Tioga Sub-basin (USGS Hydrologic Unit 02050104). Within the Genesee River drainage basin the Project occupies the Upper Genesee Sub-basin (USGS Hydrologic Unit 04130002). Watersheds included within Project limits are as follows:

Tioga Sub-basin

- Bennetts Creek (USGS Hydrologic Unit 0205010402)
- Troups Creek (USGS Hydrologic Unit 0205010405)
- Cowanesque River (USGS Hydrologic Unit 0205010408)

Upper Genesee Sub-basin

- Dyke Creek (USGS Hydrologic Unit 0413000202)
- Cryder Creek (USGS Hydrologic Unit 0413000203)

In reference to Title 5 of Article 15 within the New York State Environmental Law (Protection of Waters), the NYSDEC holds regulatory jurisdiction over state-listed protected streams. Any action which disturbs the bed or banks of these protected streams requires the issuance of a permit. The NYSDEC has classified streams state-wide with the following letters or grades, AA, AA(t), A, A(t), B, B(t), C, C(t), and D. Class AA or A streams are reserved for the streams with the highest water quality. AA or A classes indicate that the best use of the stream can be as a source of water supply for drinking, culinary or food processing purposes; primary and secondary contact recreation; and also fishing. Class B waters are suggested to only be used for primary and secondary contact recreation and fishing. The best usage of Class C waters is fishing and non-contact related activities. Class D waters represent the poorest water quality standard and activities within this water class are advised to not occur. Waters with classifications A, B, and C may also have a standard of (t), indicating that it may support a trout population, or (ts), indicating that it may support trout spawning events. Certain waters of the state are listed as protected due to their classification level. All streams and

small water bodies located in the course of a stream with a classification of AA, A, or B, or with a classification of C with a standard of (t) or (ts) are collectively referred to as "protected streams," and are subject to the provisions of the Protection of Waters regulations. Special requirements apply to sustain (t) and (ts) waters that support sensitive fisheries resources. Table 9 below lists all named streams within the Project Area, and Figure 15 portrays their location. In addition to those listed below, a number of small unnamed streams and tributaries are present within the Project Area.

Table 9. NYSDEC Classified Streams within the Project Area

Name	NYSDEC Classification	Length Within Project Area (Miles)	Drains Into	Watershed
Slate Creek	C	0.50	Bennetts Creek	Tioga
Rock Creek	C(t)	0.56	Bennetts Creek	Tioga
Bennetts Creek	C(t)	4.14	Canisteo River	Tioga
White Branch	C	1.39	Cowanesque River	Tioga
Dyke Creek	C	2.20	Genesee River	Upper Genesee
Marsh Creek	C(t)	6.39	Cryder Creek	Upper Genesee
Wileyville Creek	C(ts)	4.60	Cryder Creek	Upper Genesee
Rose Brook	C(ts)	1.81	Wileyville Creek	Upper Genesee

Characteristics of all streams identified within the Project Area will be provided in the Application including descriptions of water quality, flow rate, general aquatic ecologies, and the absence or presence of common invasive species identified by the NYSDEC. A comprehensive inventory of aquatic species and aquatic invasive species is not anticipated. Information will be based on both publically available data sets (when available) and on field data collected during on-site stream delineations.

Wetlands within the Project Area were initially examined through aerial photography interpretation, review of state and federal wetland mapping, and review of mapped hydric soils. In addition, on-site wetland and stream delineations were conducted by TRC wetland biologists during the summer and fall 2016, and are ongoing at the time of submission of this PSS. As delineation work continues within the Project Area, wetland surveys will be

conducted within the Project Area to identify/delineate wetlands and streams and collect data (regarding vegetation, soils, and hydrology), in accordance with criteria set forth in the USACE 1987 Wetlands Delineation Manual (Environmental Laboratories) and the 2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0). Field delineated wetland boundaries will be conspicuously marked with sequentially numbered surveyor's ribbon labeled "Wetland Delineation." Wetland boundaries will be flagged in the field and locations will be recorded utilizing a Trimble Global Positioning System (GPS) unit with sub-meter accuracy. Wetlands will be photo documented and TRC will also complete the Regional Wetland Determination Data Form for each wetland feature.

Preliminary siting of Project components will attempt to avoid and/or minimize temporary or permanent impacts to surface waters. The siting of the largest permanent structures of the Project, including wind turbines, POI substation, collection station, and the O&M facility, are anticipated to avoid wetlands completely. Temporary impacts associated with turbine laydown and staging areas will also be sited so as to avoid adverse impacts to surface waters.

Surface water impacts that may occur are anticipated to primarily occur from access road and collection line crossings. The number and acreage of wetland impacts due to access road crossings will be minimized by routing around wetlands whenever possible and utilizing existing crossings and narrow crossing locations to the extent practicable. Upgrades to existing crossings which are in disrepair or are undersized will also be attempted when available. Buried 34.5 kV collection lines will avoid crossing forested wetlands whenever possible, cross wetlands at narrow points, and will utilize installation techniques that minimize temporary wetland impacts. Other Project Area environmental or logistical constraints, such as Project participants/lease holders, landowner concerns, buried utilities, and other current land use, may make further avoidance of wetlands and streams unfeasible.

Approximations of acreage and linear distance of surface waters to be temporarily or permanently impacted will be presented in table form in the Application. Each impact will be individually classified and the impact amount will be based on the predetermined layout and specific impact assumptions. The table will also indicate the determined crossing procedure to be pursued in order to navigate around the resource. Also, the mitigation elements to be pursued will be stated in order to limit and safeguard the approved impact amounts on the associated surface water resource. Any crossing of NYSDEC protected streams will be specifically identified and Best Management Practices (BMPs) and guidelines followed for crossing protected streams will be developed in conjunction with both the NYSDEC and the New York State Department of Public Service (NYS DPS).

Any direct or indirect impacts expected to be associated with the construction of the Project will be described and quantified in the Application.

When the crossing of a surface water resource is deemed necessary for the Project, BMPs will be put into place following the guidelines and recommendations put forth by the NYSDEC, NYSDPS and the United States Army Corps of Engineers (USACE). Proper briefing and signage will be utilized with construction crews to dictate areas where equipment access is prohibited. Crossing will only occur along permitted access roads or through non-jurisdictional use of temporary matting to traverse delineated streams and wetlands. Also a selection of activities will be restricted within a predetermined buffer zone around delineated streams, wetlands, and other waterbodies. These buffer restrictions will include, no equipment refueling or washing in the buffer area, no storage of petroleum or chemical materials, no disposal of concrete or washwater, no amassing of construction debris or accumulation of slash materials in the area, no use of herbicides within the area, and no actions which may result in the degradation of stream banks or steep slopes above water resources.

To limit the possibility of soil erosion and sedimentation events occurring within water resources throughout the Project Area, a soil erosion and sedimentation control plan will be created and included as part of the SPDES General Permit for the Project. During construction operations the use of silt fences, hay bales, siltation catch basins, check dams and other standardized sedimentation control measures will be installed and maintained throughout the Project and until impact areas become stabilized. To facilitate soil stabilization, exposed soils will be seeded and mulched in a timely manner to reduce the risk of sedimentation events arising from storm events. Control measures will be dictated in the Project Stormwater Pollution Prevention Plan (SWPPP) (see below). Their locations and design will be shown on appropriate construction drawings. As part of the SWPPP, a monitor will be in place throughout the work period and during the restoration period in order to inspect and assess sedimentation risk and also mitigate any unforeseen issues specific to the nature of the Project Area. Dewatering will likely occur if shallow groundwater is encountered during the construction phase of the Project. Within the Article 10 Application and SWPPP, a description of predetermined dewatering methods will be provided and will work in concordance with guidelines stipulated by NYSDEC and USACE guidelines.

Stormwater

Prior to commencement of construction operations, the Applicant will issue a Notice of Intent for Stormwater Discharges from Construction Activity and will seek coverage under the SPDES General Permit. A preliminary SWPPP will be created and provided as an Appendix to the Application. The preliminary SWPPP will include: 1) a Project introduction, that will review the purpose, need, and appropriate contents of the complete SWPPP; 2) anticipated stormwater management practices, including erosion and sediment control measures; 3)

anticipated construction activities, including a preliminary construction phasing schedule and definition of disturbance areas; 4) site waste management and spill control measures; 5) proposed site inspection and maintenance measures, including construction site inspection, and construction site record keeping; and 6) conditions that will allow for the termination of permit coverage. The preliminary SWPPP will be prepared in accordance with the New York State Standards and Specifications for Erosion and Sediment Control (NYS Standards) and the New York State Stormwater Management Design Manual.

Preparation of the final SWPPP will require a level of detail that is not expected to be available until after the completion of the Application and final engineering. Following certification of the Project, the detailed engineering will move forward and aide in the preparation of the final SWPPP in accordance with the SPDES general permit. The SWPPP will be followed for management of stormwater discharge within the Project Area during the construction and restoration phases of the Project. The erosion and sedimentation control plan will be developed as part of the SPDES General Permit for the Project. The SWPPP will provide descriptions on temporary and permanent erosion and sedimentation control measures, phases of construction, disturbance limits, waste management, spill prevention, and site inspection and maintenance. Erosion and sedimentation control measures utilized during construction and operation of the Project shall, at a minimum, include the measures set forth in the SWPPP. The final SWPPP is intended to be submitted as part of the Compliance Filing.

Hydrologic models will be utilized by professional engineers in order to calculate stormwater discharges for the construction and operation phases of the Project. Pre-construction measurements of stormwater discharge of the Project Area will be utilized in order to compare and contrast proposed conditions during the post-construction phase of the Project.

Chemical and Petroleum Bulk Storage

A preliminary Spill Prevention, Containment, and Counter Measure (SPCC) plan will be created and implemented during the construction and operation of the Project to prevent the release of hazardous substances into the environment, especially near water resources. As mentioned previously, all refueling operations will be required to occur outside of the predetermined buffer area around wetland and streams within the Project Area. All contractors will be required to carry spill kits on hand at all times to control any spills. This requirement and materials included in the kit will be reiterated and explained in more detail within the SPCC plan and SWPPP to be circulated to contractors. Spills will be reported in accordance with state and federal guidelines and the contractor will be required to adhere to both the SWPPP and SPCC Plan.

The Applicant does not currently anticipate the on-site storage or disposal of large volumes of substances regulated under the chemical and petroleum bulk storage programs of New York State. If construction operations require petroleum or other hazardous chemicals to be stored on-site, those substances will be identified within the Article 10 Application and local and State laws and guidelines will be followed.

Aquatic and Invasive Species

Non-native invasive species have the potential to degrade aquatic environments. To minimize the impact on the environment, NYSDEC regulates the possession, transport, importation, sale, purchase and introduction of select invasive species (6 NYCRR Part 575). These include select aquatic species (*i.e.*, fish, aquatic invertebrates and aquatic vertebrates) as listed in Prohibited and Regulated Invasive Species dated September 10, 2014. Aquatic and invasive species will be located by a field ecologist and mapped within areas planned for disturbance by the Project facilities to support the development of an invasive species prevention and management plan. Species observed will be documented and a comprehensive plan, the Invasive Species Control Plan (ISCP), will be generated and used to mitigate the transport and spread of any observed aquatic invasive species. The ISCP will be included as an Appendix in the Certificate Application.

The ISCP will evaluate reasonable avoidance measures in order to reduce impacts to surface waters and aptly, any biological aquatic resources as well. The plan will involve predefined processes like construction materials inspection, target species treatment and removal, construction equipment sanitation; and proper site restoration techniques. Where impacts to aquatic species are unavoidable, the Article 10 application will identify appropriate mitigation measures tailored specifically to the species perceived to be impacted.

Cooling Water

This Project will not utilize cooling water during any phase of construction or operation of the facility. As such, the requirements dictated in 16 NYCRR § 1001.23(f) are not applicable to this Project.

3.24 Visual Impacts

A visual impact analysis (VIA) will be prepared for the Project, and included in the Certificate Application. The VIA will determine the extent and significance of the Project's visibility and will be performed according to the requirements as outlined in 16 NYCRR § 1001.24.

3.24.1 The Character and Quality of the Existing Landscape

Existing conditions and character of the landscape will be evaluated through the acquisition of Geographic Information System (GIS) data, review of town and county reports, topographic data, and site visits along with photographic documentation. Based on reconnaissance level field visits to the Project Area, the landscape is primarily a mix of farmland and forested area amongst rolling hills and valleys.

As part of evaluating existing conditions, Landscape Similarity Zones (LSZ) will also be defined. LSZs are areas of similar landscape/aesthetic character based on patterns of landform, vegetation, water resources, land use, and user activity, and are helpful in providing a framework for assessment and understanding the visual environment.

The Project Area is approximately 45,500 acres of land in the Towns of Greenwood, Troupsburg, and West Union, New York. Because of the typical height of an industrial type wind turbine proposed within a rural landscape, a primary study area of 5 miles is proposed. However, areas outside of 5 miles and out to 10 miles will also be investigated. Visually sensitive resources found between 5 and 10 miles will be included in the assessment (see Figure 16). The study radii includes Steuben and Allegheny Counties, New York and extends southerly into Pennsylvania.

As a result of the larger study area under consideration, a number of additional towns are included over those that fall within the designated Project Area. In order to accommodate modifications to the turbine layout, the definition of the visual impact study area is currently proposed to be 5 and 10 miles around the Project Area boundary and not around the general perimeter outline of the turbines themselves.

Towns that fall within 5 Miles: Alfred, Andover, Canisteo, Greenwood, Hartsville, Independence, Jasper, Troupsburg, West Union.

Towns that fall between 5 and 10 Miles: Alfred, Almond, Andover, Cameron, Canisteo, Hartsville, Hornellsville, Howard, Jasper, Scio, Troupsburg, Ward, Wellsville, West Almond, Willing, Woodhull.

A visual resources inventory per 16 NYCRR § 1001.24 will be performed to determine the existing publicly accessible sensitive resources that may be susceptible to visual impacts.

Preliminary investigations of potential resources are provided in Table 10. A final assessment of resources will be provided with the Article 10 Application.

Table 10. Preliminary Sensitive Visual Resources

Name	Towns	Within 5 Miles	Between 5-10 Miles
National Register Historic Places			
Alfred Village Historic District	Alfred	X	X
Alumni Hall	Alfred	X	
Alfred Steinheim Museum	Alfred	X	
Adsit House	Hornell		X
Canisteo Living Sign	Canisteo		X
Fireman's Hall	Alfred		X
Hornell Armory	Hornell		X
Hornell Public Library	Hornell		X
Residence at 114 Maple Street	Hornell		X
Old Post Office	Hornell		X
St. Ann's Federation Building	Hornell		X
Terra Cotta Building	Alfred		X
DEC & Federal/State Recreation Lands			
Greenwood State Forest	Greenwood	X	
Rock Creek State Forest	Greenwood	X	
Turkey Ridge State Forest	Greenwood, Jasper	X	
Almond Lake (US Army Corps Of Engineers)	Hornellsville		X
Canacadea State Forest	Hornellsville		X
Burt Hill Multiple Use Area	Howard		X
Bully Hill State Forest	Almond		X
Vandermark State Forest	Ward		X
Plumbottom State Forest	Ward		X
Wag Trail	Wellsville, Willing		X
Phillips Creek State Forest	Alfred, Ward, West Almond		X
Palmer's Pond State Forest	Ward, West Almond		X
Turnpike State Forest	Almond, West Almond		X
Bikeways			
State Bikeroute 17	Alfred, Andover, Wellsville	X	X
State Bikeroute 19	Wellsville, Willing		X

3.24.2 Visibility of the Facility

As noted in 3.24.1, a resources inventory will be conducted to understand areas of public access that may have potential visual impacts.

To determine visibility of the Project, a GIS-based viewshed analysis will be performed and prepared by using ESRI ArcGIS Spatial Analyst software and will include vegetated tree groups to realistically depict the surrounding landscape. This analysis is a GIS analytical technique that allows one to determine if and where an object, such as a turbine, can geographically be seen within a larger regional area and is primarily based on elevation data. The results of the viewshed analysis are combined with the visual resources inventory locations to predictively identify those resource areas that may potentially see all or some portion of the turbines.

Photographic simulations will also be prepared to assess the quality of view from select viewpoint locations. Photographs to be used in simulations will be acquired during site visits. Several candidate locations for simulations will be chosen resulting from a number of preliminary investigations, with the ultimate focus on the visual resources inventory in combination with the predicted visibility of the viewshed analysis and on-the-ground site visits. The Applicant will consult with DPS staff and other stakeholders to assist in the selection of final viewpoints for simulations.

3.24.3 Visibility of Above-ground Interconnections and Roadways

The viewshed analysis described in 3.24.2 will also identify locations within the visual study area where it may be possible to view proposed transmission structures. Access roads or transmission structures will be included in any visual simulation in which they would be visible.

3.24.4 Appearance of the Facility Upon Completion

Photosimulations will be prepared from selected vantage points as noted in sections 3.24.2 and 3.24.6 in order to represent the appearance of the Project upon completion. A 3-D model of the project will be created according to turbine and site engineering specifications to be used in photosimulations. High resolution photography will be obtained as part of the site visit tasks to use in the simulations.

3.24.5 Lighting

The Project FAA lighting plan will be incorporated into the VIA and will show which turbines will have aviation obstacle lighting. Lighting specifications, including any tower access or safety lighting will also be included.

3.24.6 Photographic Overlays

Photographic simulations will be prepared from final chosen representative viewpoints. To create the simulations, 3DS MAX 2016 software will be used to correctly dimension a model of the Project into the digital photographic image from each viewpoint location. For a given vantage point, the visualization software is capable of providing and adjusting a camera view that matches that of the actual photograph. From the field effort, the documented camera coordinate (x,y,z) positions will be entered into the model using a sub-meter global positioning unit (GPS). A full frame digital camera with a fixed 50 mm focal length lens will be used for obtaining photographs. A focal length of 50 mm will be used as it most closely resembles human vision. Reference locations, which are existing visible objects in the photograph such as light posts, building corners, trees, gate posts or utility poles will be obtained as part of the field task to assist with refined placement of the proposed Project within the photograph. High point references will be measured with a digital rangefinder.

3.24.7 Nature and Degree of Visual Change from Construction

Visual changes will be ongoing throughout the construction phase and will be temporary. This will include transportation and assembly of turbines, construction of access roads, and higher than normal truck traffic. Illustrations of general construction procedures for wind farms will be provided.

3.24.8 Nature and Degree of Visual Change from Operation

The proposed Project Site will be located within rural properties where landscape patterns mainly consist of a matrix of open/agricultural parcels surrounded by blocks of forested areas. The turbine model currently under consideration is the GE 3.43-137 (or similar) with a hub height of 110 meters and a rotor diameter of 137 meters, resulting in a ground to blade tip height of approximately 585 feet above ground surface. In order to qualify for federal production tax credits, the Applicant may also use a small number of GE 1.715 MW (or similar) wind turbines with a rotor blade diameter of 103 meters and an 80 meter tubular steel tower.

The Site is within the Major Land Resource Area (MLRA) of the Glaciated Allegheny Plateau and Catskill Mountains. This MLRA is primarily in the southern New York section of the Appalachian Plateaus Province of the Appalachian Highlands. In the area of Steuben and Allegheny counties, topography is hilly and rolling generally characterized by numerous valleys and troughs with valley walls that are typically steep. Approximate elevation in the visual study area ranges between 1217 and 2427 feet above mean sea level. Preliminary terrain analysis show the geomorphology of the area over distance may offer visual impediments in the landscape within the Project's visual study area.

Visual and landscape characteristics of the Project will be described in the Application. Descriptions of how land characteristics including tree cover might preclude views, will be described as well. Existing conditions and the nature and degree of visual change will be summarized for each photographic simulation. Simulations will be made from vantage points from public areas with the most open views to the Project as possible.

3.24.9 Operational Effects of the Facility

Potential visual impacts resulting from Project operation may include visibility of Project components from sensitive places of statewide or local concern, shadow flicker at occupied structures, visibility of turbine lighting, and visibility of minor facility monitoring and maintenance activities. Shadow flicker occurs when a turbine operates between the sun and a receptor (*i.e.*, an occupied structure). As the turbine blades move in this situation, an alternating pattern of shadow and sunlight may be cast on the receptor and this phenomenon is known as shadow flicker. Shadow flicker is generally limited to relatively short periods during times of day/year when the sun is low in the sky.

To address operational effects of the facility, an appropriate shadow flicker analysis for the Project will be provided in the Article 10 application.

3.24.10 Measures to Mitigate for Visual Impacts

As discussed above, the most effective means of mitigating visual impacts is through optimal siting, adequate setbacks, and design of Project components. Discussion of general mitigation strategies such as design, appearance, lighting, siting, avoidance and layout will be discussed in the Certificate Application.

3.24.11 Description of Visual Resources to be Affected

Local, state, and federal visual resources will be investigated per 16 NYCRR § 1001.24. These are areas such as landmark landscapes; wild, scenic or recreational rivers administered respectively by either the DEC or the APA pursuant to ECL Article 15 or Department of Interior pursuant to 16 USC § 1271; forest preserve lands, conservation easement lands, scenic byways designated by the federal or state governments; Scenic districts and scenic roads, designated by the Commissioner of Environmental Conservation pursuant to ECL Article 49 scenic districts; Scenic Areas of Statewide Significance; state parks or historic sites; sites listed on National or State Registers of Historic Places; areas covered by scenic easements, public parks or recreation areas; locally designated historic or scenic districts and scenic overlooks; and high-use public areas.

Viewer groups and viewer exposure including residential areas and high volume travel corridors will also be described.

3.25 Effects on Transportation

Wind power generating projects have the potential to create transportation impacts as a result of short-term construction activities (temporary impacts), and as a result of long-term operation and maintenance of the Project (permanent impacts). The Certificate Application will present a description of existing, pre-construction roadways and their associated usage within the Project Area (and the larger Study Area, if necessary/practical). The Project Area is currently served by a network of state, county, and local roadways. Existing roads within the Project Area range from two-lane highways with paved shoulders to seasonally maintained, dirt/gravel roads. Data will be obtained from the New York State Department of Transportation (NYSDOT) Traffic Data Online Viewer to review existing traffic volumes along the proposed routes for delivery of Project components, construction, and operation of the Project.

The Article 10 Application will include a site plan depicting the location and dimensions of all Project related access roads used for construction, maintenance, and operation on the Project Site. The detailed roadway descriptions included in Exhibit 25 of the Certificate Application will include existing vehicle traffic, general use levels, accident occurrence levels, school bus service areas, and emergency response vehicle departure routes to and from the Project. The load bearing and structural rating of existing roads will be specified in the description. An analysis of the suitability of existing road surfaces and intersections for transport of Project related materials will be provided. Local, state and federal transportation agencies, highway departments, and emergency responders will be consulted with throughout this process. Eight Point Wind has recently started consultations with dozens of these stakeholders, as shown in the PIP Meeting Log (see Appendix A).

A route evaluation study will be prepared for the Project and included in the Article 10 Application, which will identify public road constraints (*e.g.*, inadequate turning radii/intersections and road widths) and potential haul routes. This study will inform the conceptual site plan through haul route identification and associated access to various turbines.

The extent of the roadway segment improvements (required for safe delivery of Project components and operation) will be verified with the turbine supplier/contractor prior to Project construction, and coordinated with state, county, and local highway departments prior to the arrival of oversize/overweight vehicle on-site. Entrance and departure routes for individual work sites will be identified throughout the Study Area for construction vehicles transporting Project components (*i.e.*, turbine tower sections; blades and nacelles) as well as construction materials such as concrete, gravel, water etc. If over-size load deliveries are anticipated to be made, improvements or repairs will occur to accommodate any projected

impacts to local roads. This information will be included in Exhibit 25 of the Certificate Application.

During construction, the Project will generate both standard truck and oversized/overweight (OS/OW) vehicular traffic as estimated in Table 11 below. The circulation of OS/OW vehicles along Project Area and delivery route roadways will result in minor delays for flagman and temporary traffic signals.

Table 11. Construction Traffic

Activity	1	3	4	5	6	7	8	Total
	Mobilization	Peak Construction				De-Mobilization		
Site Preparation and Grading for Staging/Construction Offices	62	47						109
Water Delivery	172	658	658	658	345			2491
Access Road Construction	31	47	415					493
Road Aggregate Delivery	121	242	727					1090
WTG Foundation Installation		188	376	376	241			1181
Fine and Coarse Aggregate Delivery		95	191	191	100			577
WTG Parts Delivery			100	100	100			300
Collector, Substation, and O&M Facility Construction			34	62	62			158
Construction Clean-up						112	84	196
Site Reclamation and Revegetation						46	48	94
Total By Month	386	1277	2501	1387	848	158	132	Grand Total: 6689

Additional vehicle use will include gravel trucks, pick-up trucks for equipment and tools, and trucks and cars for transporting personnel. The Application will provide a list of typical construction vehicles anticipated to be in use, along with the associated vehicle weights, and estimated numbers of daily round trips for each.

Vehicle transportation will be minimized to the extent practical and designed to efficiently manage the temporary increase of traffic during construction activities.

Once construction of the Project is complete, transportation levels during operations will be significantly reduced. During operation, traffic will likely be concentrated around the O&M facility resulting from Project employees traveling to and from the O&M building. Maintenance activities will generally involve individuals or small crews and utility crew pick-up trucks, which are typical vehicles currently in use in this rural area. Normal, scheduled maintenance activities may involve monthly visits to each turbine location, but certain turbines or other Project improvements could require periods of more frequent service visits. Such service visits typically involve one to two pick-up trucks. If an unscheduled repair of a significant component should be required, larger vehicles similar to those used during construction may be required for a short duration and limited location. The Project owner is responsible for the maintenance of all private access roads leading to the turbine sites. The Application will provide an O&M Plan that will provide more detail on scheduled and unscheduled maintenance.

An evaluation of the traffic and transportation impacts of the facility from construction and operations related activities will be provided in Exhibit 25 of the Application. The evaluation will identify practical mitigation measures to help reduce potential problems associated with construction and facility operation transportation and traffic, including any road use and restoration agreements in place. Exhibit 25 will include a road use survey, with traffic patterns, accident rates, and school bus routes. To help assess impacts to emergency services, Exhibit 25 will include a map showing locations of emergency services providers relative to the Study Area.

The Project will be designed to avoid or mitigate impacts to aeronautical and military operations. Airports within the vicinity of the Study Area have been identified as stakeholders in the PIP and have been notified. The nearest military airbase to the Project Area is the Youngstown Air Reserve Station approximately 160 miles to the west in Vienna, Ohio. The Applicant will be filing FAA Form 7460-1 Notice of Proposed Construction or Alteration for each of the proposed wind turbine locations, at which time the FAA will conduct aeronautical studies (including outreach to Department of Defense for their input) and make a determination as to whether or not the proposed structure presents a hazard to navigation.

In addition, initial contact has been made with the Capital Airspace Group (CAG) to identify any potential obstacle clearance surfaces established by the FAA located within the Study Area. CAG will conduct an obstruction evaluation and airspace analysis for the Project in Steuben County, New York and surrounding areas. The purpose for the analysis is to identify obstacle clearance surfaces established by the Federal Aviation Administration (FAA) that could limit wind development.

The FAA requires that all structures exceeding 200 feet above ground level (AGL) be submitted to the FAA so that an aeronautical study can be conducted. The FAA's objective in conducting aeronautical studies is to ensure that proposed structures do not have an effect on the safety of air navigation and the efficient utilization of navigable airspace by aircraft. The end result of an aeronautical study is the issuance of a determination of 'hazard' or 'no hazard'. The proposed Eight Point Wind Project is not anticipated to have any adverse effects on instrument systems used for air traffic control, guidance, weather, or military operations. These potential impacts will be evaluated as part of the FAA's aeronautical study. Alterations of the Project layout during the initial design will be the primary means of avoiding and minimizing communication resource impacts and given the remote location of the Project, communication resource impacts are not expected.

3.26 Effects on Communication

The Article 10 Application will consider all communication sources above and below ground within a 2-mile radius of the Project, including the following: underground cables and fiber optic lines, AM radio, FM radio, television stations, telephone systems, microwave transmission (all affected sources, not limited to a two-mile radius), emergency services communication systems, municipal/school district services, public utility services, Doppler/weather radar (All affected sources, not limited to a two-mile radius), air traffic control (all affected sources, not limited to a two-mile radius), Department of Defense (DOD)/Armed Forces (all affected sources, not limited to a two-mile radius), global positioning systems, Loran (all affected sources, not limited to a two-mile radius), and amateur radio licenses registered to users.

Due to the remote location of the Project, there are not anticipated to be underground cables or fiber optic lines within two miles of the Project Area. However, the Applicant will conduct more research for these resources, and identify any underground cables or fiber optic lines within two miles of the Project Area if they are found to exist. As a first step, the Applicant will consult with Dig Safe New York (DSNY) in an effort to obtain maps of any buried cables within two miles of the Project Area. NEER will submit a “design ticket” to DSNY, which will initiate a process in which utilities and DSNY provide relevant mapping to NEER. The Project will avoid any impacts to underground cables or fiber optic lines.

As a first step in determining any potential impacts to long-range and weather radar(s), military training route(s) and special airspace(s), the Applicant consulted the DOD Preliminary Screening Tool. Through the FAA, the DOD provides a preliminary screening tool to provide information for wind energy developers regarding the potential impacts to long range radar(s) and military operation areas prior to filing Notices of Proposed Construction with the FAA. The long range radar tool provides a desensitized figure indicating whether a particular geographic area is within line-of-sight of a long range radar. The Preliminary Screening Tool indicates an aeronautical study is required, and the FAA obstruction evaluation process will provide the definitive analysis of potential impacts to radars. Formal and informal consultation with the DOD will be on-going from development through construction stages of the Project.

NEER will provide written notification of the Project to the National Telecommunications and Information Administration (“NTIA”). Upon receipt of a notification, the NTIA will provide plans for the proposed Facility to the federal agencies represented in the Interdepartment Radio Advisory Committee (IRAC), which include the DOD, Department of Education (DOE), Department of Justice (DOJ), and the Federal Aviation Administration (FAA). The NTIA will then identify any Project-related concerns during a 45-day review period, and then issue a

letter to the Applicant detailing the findings of their review. The review letter will be included in Exhibit 26 of the Certificate Application.

In the Article 10 Application, plans to mitigate impacts to existing communication sources, if any, will be provided in the post-construction activities description and design plans illustrating the proposed wind turbines, overhead electrical collection lines, and collection substation. A Complaint Resolution Procedure will be developed to resolve issues and complaints that may arise within the local community, largely on an individual basis. The Procedure will outline the steps for investigation and resolution of such complaints.

3.27 Socioeconomic Effects

The Eight Point Wind Energy Project construction, operation, and maintenance will be analyzed to determine the socioeconomic effects associated with the County and municipalities located within the Project Area. Estimates at construction and operation levels will provide a basis for contribution to current demographics of the proposed Project Area. Current demographics for the Towns of Greenwood, West Union, and Troupsburg are presented in Table 12 below:

Table 12. Demographics

<i>Population</i>	<i><u>Greenwood</u></i>	<i><u>West Union</u></i>	<i><u>Troupsburg</u></i>
2010 Total Population	801	312	1,291
2014 ACS 5-Year Population Estimate	758	375	1,333
Median Age	40.6	47.5	34.7
<i>Educational attainment</i>			
% high school graduate or higher	93.3%	89.0%	82.3%
Total housing units	304	157	416
Median household income	48,750	39,531	39,674
Foreign born population	13	15	17
Individuals below poverty level	8.2%	16.8%	31.9%
Veterans	63	32	62
<i>Race and Origin</i>			
White	753	371	1,304
Black or African American	0	0	8
American Indian and Alaska Native	0	0	0
Asian	3	1	4
Native Hawaiian and Other Pacific Islander	0	0	0
Two or more races	2	0	0
<i>Employment Status</i>			
In Labor Force	333	176	555
Not in Labor Force	235	76	385
Percent Unemployed	5.1%	13.6%	10.5%

^xDemographic profile of U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates

Multiple levels will be analyzed and estimated in the Article 10 Application, in compliance with Exhibit 27 requirements in Part 1001.27, to determine potential socioeconomic impacts of the Project, including:

A. On-site construction work-force impacts:

Utilizing the National Renewable Energy Laboratory (NREL) Jobs and Economic Development Impact (JEDI) model, it is estimated that the Eight Point Wind Energy Project will generate approximately 66 on-site full time equivalent construction jobs. However, based on the Applicant's experience constructing commercial scale projects such as the proposed Project, it is estimated that 150-200 jobs will be created during the eight month construction period. These jobs will include electricians, carpenters, iron workers, crane operators, heavy equipment operators, truck drivers, general laborers, supervisors, and on-site managers. These estimates will be further refined and detailed in Exhibit 27 of the Application and will include a breakdown of the anticipated on-site workforce by discipline for each quarter during the construction period, along with an estimate of the peak construction employment level.

B. Construction payroll and supply chain impacts:

According to the preliminary JEDI model estimates, the anticipated labor costs during the construction phase will be approximately \$13.8 million. Local expenditures within the general area of Steuben County and the Southern Tier during the construction phase, which are likely to include construction materials such as concrete, gravel, and re-bar, as well as fuel, meals and hotel rooms, are estimated to add approximately \$19.5 million (exclusive of sales tax) into the local economy. Turbine and supply chain impacts are estimated to involve an additional 198 jobs. These estimates will be further refined and detailed in Exhibit 27 of the Application.

C. Secondary employment impacts by construction:

According to the preliminary JEDI model estimates, an additional 107 secondary (or induced) jobs will be impacted by construction activities. These are indirect jobs that are impacted by spending on materials and services, rather through direct hiring by Eight Point Wind. This estimate will be further refined and detailed in Exhibit 27 of the Application and will provide the basis of any economic multiplier factor or other assumption used in the analysis.

D. Post construction employment impacts:

According to the preliminary JEDI model estimates, once the Project is operational approximately 12 jobs will be created to operate and maintain the on-site operations and supply chain for parts and maintenance materials. Eight Point Wind estimates that up to six local jobs will be created and staffed out of the locally sited O&M facility, at an annual payroll estimated to be in the range of \$600,000 in salary and

compensation. Annual expenditures for direct operation and maintenance expenses are estimated to be approximately \$2.6 million (approximately \$850,000 of which is expected to be spent locally) and cover parts, supplies, snow plowing, road maintenance, landscape services, fuel, vehicle maintenance, tools, etc. These estimates will be further refined and detailed in Exhibit 27 of the Application.

E. Post construction secondary employment impacts:

According to the preliminary JEDI model estimates, an additional five secondary (or induced) jobs will be impacted by operations and maintenance activities. This estimate will be further refined and detailed in Exhibit 27 of the Application.

F. Construction and operation school district impacts:

Eight Point Wind encourages hiring local employees to fill temporary construction positions, as well as permanent operations jobs, to the extent possible. As a result, there will be few if any new students enrolled in the area's schools and no significant impact to the school districts in the area.

G. Construction and operation impacts of municipal, public authority, and utility services:

Eight Point Wind will continue to coordinate with the local municipalities, utilities and emergency services providers to ensure that public services and health and safety are not negatively impacted by the Project. The Steuben County Sheriff's office, NY State Police, and local fire and ambulance departments have adequate resources to monitor any vehicular traffic from construction and operations activities on area roads, to address routine medical needs and to address any security issues related to vandalism that may occur.

Eight Point Wind employees will be trained in fire safety, high voltage, working in confined spaces, working at heights, and tower evacuation/rescue. It is anticipated that local fire and ambulance personnel would primarily be attending any injuries or medical situations outside of the turbine structures at ground level.

In the rare case of a fire within a turbine structure, it is anticipated that the fire would be allowed to burn itself out. The existing resources of local Fire Departments are expected to be adequate to secure the areas around the structure to ensure that the fire does not spread to adjacent vegetated areas. All turbines will be sited with adequate setback from residences, structures, roads, utilities and property lines to ensure that any fire or collapse will not impact the health and safety of area residents. Eight Point Wind will continue to coordinate with municipal officials and emergency services providers and provide an update to this information in Exhibit 27 of the Application, including any training needs or equipment deficiencies that may be identified in order to address any contingency plans for emergency response.

The Project will have no need for potable water connection or wastewater connection (other than for the O&M building similar to that of a typical residence) and therefore will not impact any public infrastructure beyond local roadways which will be returned to at-least pre-existing conditions following the completion of construction. Waste disposal will be limited to small amounts of solid waste (paper, rags, packing cardboard) and will be disposed of properly by Project work crews in designated receptacles for disposal in properly licensed off-site landfills.

H. Designated tax jurisdiction, tax and payment impacts:

The following entities have tax assessment jurisdiction on parcels within the Project Area (see Figures 2 and 17 for locational reference):

- Steuben County
- Town of Greenwood
- Town of Troupsburg
- Town of West Union
- Canisteo – Greenwood Central School District
- Jasper – Troupsburg Central School District
- Fire Districts of Greenwood, Troupsburg and West Union

Eight Point Wind anticipates that these entities will benefit from taxes on Project components sited within their jurisdictions. The Applicant anticipates entering into PILOT agreements and/or Host Community Agreements with some or all of these entities. Eight Point Wind will continue to coordinate with municipal officials and provide an update to this information in Exhibit 27 of the Application, including a breakout of available agreements by taxing jurisdiction.

I. Smart growth public infrastructure compliance impacts:

New York Environmental Conservation Law (ECL) Article 6, Section 107 requires that the construction of new or expanded “public infrastructure” meet certain Smart Growth criteria. The Project is a privately funded, merchant energy project and as such is not subject to ECL § 6-107.

3.28 Environmental Justice

The following information on impacts to Environmental Justice areas was previously provided in the Project's PIP, and to date Eight Point Wind has received no comments concerning Environmental Justice.

The New York State Department of Environmental Conservation (NYSDEC) provides map files of Potential Environmental Justice Areas it identifies as census block groups with populations that meet one or more of the following thresholds:

- 51.1% or more of the population in an urban area reported themselves to be members of minority groups; or
- 33.8% or more of the population in a rural area reported themselves to be members of minority groups; or
- 23.59% or more of the population in an urban or rural area had household incomes below the federal poverty level.

According to a review of NYSDEC's website (www.dec.ny.gov/public/899.html accessed 12/21/15) which utilizes the 2000 Census as its most up to date data source, the closest Potential Environmental Justice Areas to the Project Area are located in Alfred in Allegany County and Hornell in Steuben County – neither of which are located within the Project Area (see Figure 18).

- Census Block Group ID 360039508002 is located approximately 3.1 miles west/northwest of the Project Area (at the closest point). This area is in Allegany County in and near the Village of Alfred. It is categorized as a rural area, where 9.87% of the population are minorities and 28.76% are below the federal poverty level.
- Census Block Group ID: 361019609003 is located approximately 0.5 miles north of the Project Area's proposed interconnection point at the existing Bennett Substation. This area is in Steuben County in the city of Hornell. It is categorized as an urban area, where 10.76% of the population are minorities and 30.94% are below the federal poverty level.
- Census Block Group ID: 361019609001 is located approximately 1.0 mile north of the Project Area's proposed interconnection point at the existing NYSEG Bennett Substation. This area is in Steuben County in the City of Hornell (contiguous with census block 361019609003 above). It is categorized as an urban area, where 5.3% of the population are minorities and 27% are below the federal poverty level.
- Census Block Group ID: 361019608002 is located approximately 1.0 mile north of the Project Area's proposed interconnection point at the existing NYSEG Bennett

Substation. It is in the western portion of the City of Hornell in Steuben County, and is categorized as an urban area. The 2000 census statistics show 5.42% of the population are minorities and 31.73% are below the federal poverty level.

Because the areas above are outside of the Project Area, the Project is not expected to negatively impact these or any other environmental justice areas.¹ Therefore, the full Environmental Justice Analysis required by 6 NYCRR 487.6 is not required.

¹ An additional review of the U.S. Environmental Protection Agency's (EPA) Environmental Justice screening and mapping tool (EJSCREEN) (<http://www.epa.gov/ejscreen>) which utilizes up to date demographic data from the American Community Survey (ACS) five-year summary file that the U.S. Census Bureau compiles yearly, resulted in similar findings as those from the NYSDEC. The EPA EJSCREEN Demographic Index (a combination of percent low-income and percent minority calculated from the Census Bureau's ACS 2008-2012) identified similar areas, none of which are within the Project Area.

3.29 Site Restoration and Decommissioning

The Eight Point Wind Project has an estimated useful economic life of approximately 30 years, at which time the Project will be decommissioned or repowered. In the event that the Project permanently ceases operations, the Decommissioning Plan will be implemented to remove and recycle, to the greatest extent possible, equipment and related materials in order to essentially return the Project Area to its pre-construction condition available for agriculture, timber, recreational and other open space usage as determined by the landowner.

The decommissioning of the Project is, in many ways, the reverse of its construction. Much of the same equipment that was utilized in the construction of the Project, such as heavy lift cranes, trucks, backhoes, etc., will again be used in the decommissioning and removal of the components. Large quantities of fiberglass, steel, cable and concrete will be removed and transported off-site for recycling and/or disposal at approved facilities. Off-site disposal facilities will be identified at the time of decommissioning, as availability of facilities is likely to change in the decades during the Project's useful economic life. The Project will work with local officials and landowners to ensure minimal environmental impact to the area.

In general, the decommissioning of the Project will begin with the disconnection of the collection cables from each wind turbine. Overhead collection cables will be removed and recycled, while any underground sections will be abandoned in place in order to minimize environmental impacts or may be pulled up and recycled, as will be determined in consultation with the landowner. Collection cable support towers/poles will be removed and recycled.

Wind turbines will be prepared for dismantling by draining all fluids according to Operations and Maintenance procedures and removing those fluids off-site for proper disposal and/or recycling. Each wind turbine would then be deconstructed with the removal of blades, hub, nacelle and tower sections in that order. Once the wind turbine and tower have been dismantled and removed from the concrete foundation, the foundation will be partially broken up and removed. The concrete will be removed to a minimum depth of 3 feet below the surrounding ground level and covered with appropriate clean fill. Security fencing will be removed and recycled. Access roads will be left in place for the use of the landowners, or removed at landowner discretion if they do not intend to make use of the access roads. Disturbed areas will be regraded, topsoiled, and seeded to the extent necessary. It is anticipated that the decommissioning of the Project would take up to a year to complete (more if any permitting is required).

If conditions permit, after the initial 30-year life of the Project, the Applicant may "repower" the Project, if circumstances permit. When a location with good wind resources and sufficient transmission capacity is found, combined with landowners and a community

willing to host a wind energy project, the Applicant wants to stay in that area and produce wind energy as long as is possible. In California, for example, NEER is beginning to repower the first generation of wind farms by replacing old, inefficient wind turbines with new turbines that produce wind energy more efficiently and more cost effectively. If the conditions in Steuben County persist, a customer for the energy and attributes can be obtained, and the Applicant is able to obtain a permit for a repower, then the Applicant may try to repower rather than decommission. Regardless, the Applicant will be prepared to decommission the Project and fulfill its obligations when the time comes.

Eight Point Wind is contractually obligated with the landowners to remove improvements, including wind turbines, foundations, and other facilities to a depth of at least three feet below the surface and restore the property to substantially the same condition that existed immediately prior to construction. In addition to the contractual obligations, local township laws require that a fund or bond be established and maintained by the Applicant for the life of the Project. The details of the decommissioning financing will be provided in Exhibit 29 of the Article 10 Application.

3.30 Nuclear Facilities

This requirement is not applicable to the Eight Point Wind Energy Center, as there are no Nuclear Facilities included in the proposed Project.

3.31 Local Laws and Ordinances

Eight Point Wind will continue to communicate with the municipalities and local agencies regarding the substantive requirements of local laws governing the construction, operation, and maintenance of the Project. The Project will be located in the Towns of Greenwood, Troupsburg, and West Union in Steuben County, New York. Each of these towns either has a wind energy law in place or drafted as mentioned previously. The Applicant will also be communicating with the Towns of Hartsville and Hornellsville regarding the transmission line that will be permitted through the Article VII process.

A. Local Procedural Requirements

The following sections contain lists of local ordinances, laws, resolutions, regulations, standards, and other requirements applicable to the construction and operation of the Eight Point Wind Energy Project that are of a procedural nature for those towns within the Project Area and that are supplanted by PSL Article 10:

Town of Troupsburg Wind Energy Facilities Law (Local Law #1 of 2012)

- *Section 1.1.6(A) through 1.1.6(H): Permits Required.* Wind energy facilities must be constructed and operated in accordance with this section.
- *Section 1.1.8(A) through 1.1.8(B): Wind Energy Facility Rules.* Initial requests for Wind Energy Overlay Districts shall be submitted with applications for WECS Special Use Permits. Accessory structures or facilities may be added via Special Use Permit in established District.
- *Section 1.1.9(A): Applications for Wind Energy Conversion Systems Special Use Permits and Wind Energy Facilities.* Application requirements for the creation of a Wind Energy Facility and Special Use Permit for individual WECS.
- *Section 1.1.10(A) through 1.1.10(J): Application Review Process.* Process for requesting pre-application meetings and submission of final application, as well as fee requirements and public hearings.
- *Section 1.1.16(A) through 1.1.16(D): Creation of a Wind Energy Facility and Issuance of Special Use Permits.* Decision making process by the Town Board.
- *Section 1.1.9(A) through 1.1.19(C): Permit Revocation.* Noise testing and operational requirements.

Town of Greenwood Wind Energy Facility Law (Draft Local Law)

- *Article I, Section 6 (A) through (E): Permits Required; Transfer; Modifications.* Wind energy facilities must be constructed and operated in accordance with this section.

- *Article I, Section 7(A): Applicability.* This law applies to all Wind Energy Facilities proposed after the effective date of this law.
- *Article II, Section 10: Applications for Wind Energy Permits for Wind Turbine Generators.* Application requirements for a Wind Energy Permit.
- *Article II, Section 11: Application Review Process.* Process for requesting pre-application meetings and submission of final application, as well public hearings and SEQRA Review.
- *Article II, Section 17(A) through (C): Issuance of Wind Energy Permits.* Procedures upon approval of Wind Energy Permit application.
- *Article II, Section 19(A) through (F): Permit Revocation; Abatement.* Revocation, removal and decommissioning procedures.

Town of West Union Wind Energy Facility Law (Draft Local Law No. 2 of 2006)

- *Article I, Section 5(A) through (E): Permits Required; Transfer; Modifications.* Wind energy facilities must be constructed and operated in accordance with this section.
- *Article I, Section 7(A): Applicability.* This law applies to all Wind Energy Facilities proposed after the effective date of this law.
- *Article I, Section 8: Permit applications granted as applicable under this local law shall be \$1,500.00 per tower, except as provided herein.*
- *Article II, Section 10: Applications for Wind Energy Permits for Wind Turbine Generators.* Application requirements for a Wind Energy Permit.
- *Article II, Section 11: Application Review Process.* Process for requesting pre-application meetings and submission of final application, as well public hearings and SEQRA Review.
- *Article II, Section 14(A) through (B): Roads and Traffic.* Traffic routes must be established as part of the application review process and all traffic plans must be submitted and approved by the Town of West Union Highway Superintendent.
- *Article II, Section 17(A) through (C): Issuance of Wind Energy Permits.* Procedures upon approval of Wind Energy Permit application.
- *Article II, Section 19(A) through (F): Permit Revocation; Abatement.* Revocation, removal and decommissioning procedures.

Local Procedural Requirements to be Implemented by Municipality to be Authorized by the Board

Eight Point Wind does not request the Board to authorize a municipality to implement any local procedural requirements.

Variation from Local Law Requirements

Eight Point Wind currently plans to develop the Project in accordance with the applicable substantive local laws and ordinances with the exception of the following turbine height restrictions.

- Greenwood, Article 2, Section 12(B)
- Troupsburg Section 1.1.11(A)13

Eight Point Wind is currently in discussions with the local municipalities regarding this limitation (and potentially increasing the turbine height restriction) and will provide any update available in the Application.

B. Local Substantive Requirements Requested that the Board not Apply

Other than the turbine height restriction noted above, at this time the Applicant has determined that none of the local substantive requirements are unreasonably burdensome in terms of existing technology, cost/economics, or consumer needs. Therefore, the Applicant is not currently requesting that the Board not apply any other of the substantive requirements of the local ordinances.

C. Zoning Designation

There are no zoning codes or designations for the Towns of Troupsburg, Greenwood, or West Union.

3.32 State Laws and Regulations

3.32.1 State Permits and Approvals

The Applicant has compiled a list of permits, and other authorizations required by state agencies to advance the construction of the Project (see Table 13 below). Throughout the duration of the Article 10 preparation process, the Applicant will coordinate with agencies listed in Table 13 and provide an updated table upon submission of the Article 10 Application. Table 13 indicates each permit or other authorization and the associated regulatory agency, requirements, preliminary studies and application requirements, and an estimated agency review time.

Table 13. State Reviews, Permits and Approvals

Permit/ Clearance	Regulatory Agency ¹	When Required	Potential Studies & Application Requirements	Status and Estimated Approval Times
Article 10 Siting Certificate	Siting Board	Construction and operation of major electric generating facilities pursuant to Article 10 of the Public Service Law	Article 10 Application to be prepared in accordance with 16 NYCRR Chapter X (Certification of Major Electric Generating Facilities)	Final Public Involvement Plan (PIP) filed in March 2016.
Article VII Transmission Line Siting Certificate	PSC	Major electric transmission facility	Project Application to be prepared in accordance with Article VII Regulations	TBD
Wetlands Permit (Article 24 of ECL)	NYSDEC	Impacts to state- regulated wetlands or their 100 foot adjacent areas	Delineations for this Project are underway in Summer 2016.	Issuance will be coordinated as part of the Article 10 process
Waterbodies Permit (Article 15 of ECL)	NYSDEC	Impacts to state- regulated waterbodies or their 50 foot	Delineations for this Project are underway in Summer 2016.	Issuance will be coordinated as part of the Article 10 process

Permit/ Clearance	Regulatory Agency ¹	When Required	Potential Studies & Application Requirements	Status and Estimated Approval Times
		adjacent areas		
Stormwater Permit (SPDES GP-0-15- 002)	NYSDEC	Soil disturbance of one (1) or more acre	Preparation of a SWPPP	Issuance will be coordinated as part of the Article 10 process
Water Quality Certification (Section 401 of CWA)	NYSDEC	Projects that will result in the discharge of dredged or fill material into WOTUS	Delineations for this application are underway in Summer 2016.	Issuance will be coordinated as part of the Article 10 process.
Endangered and Threatened Species – Incidental Take Permit (Article 11 of ECL)	NYSDEC	If “take” of a state-listed species is unavoidable	Wildlife studies underway to help determine whether there will be any impact to state-listed species.	Issuance will be coordinated as part of the Article 10 process.
Highway Work Permits	NYS DOT	Required for overhead or underground crossings of state highways, access roads from state highways, and temporary widening of intersections at state highways.	Complete Standard Permit Application	State Route 417 and 248 are the main state highways within the Project Area.
Oversize/Overweigh t Vehicle Permit	NYS DOT	Required for wind turbine delivery vehicles. May be required for transformer deliveries.	Complete Standard Permit Application	Approved once routes are finalized.

Permit/ Clearance	Regulatory Agency ¹	When Required	Potential Studies & Application Requirements	Status and Estimated Approval Times
Historic Preservation Act (Section 14.09)	SHPO	Project must go through review to determine whether it will affect historic or culturally significant properties.	Phase I Assessment may be required.	Project has been preliminarily reviewed on SHPO CRIS.
Agricultural and Markets Law – Article 25-AA	NYSDAM	Consultation required as Project is located within certified Agricultural Districts	Review of Agricultural District Mapping & Coordination with NYSDAM	Consult with NYSDAM for recommendations on how to minimize impacts to agricultural operations as part of the Project. Consultation will be incorporated into Article 10 process.
Interconnection Studies	NYISO	Interconnectio n Required	Feasibility study and system reliability impact study underway.	Interconnection requested submitted May 2016.

3.32.2 Compliance with State Requirements

The Applicant intends to build and operate the Project in accordance with state laws and regulations as described herein.

3.32.3 State Approvals Applicant Requests Be Left With State Agencies

At this time, the Applicant anticipates that the NYSDOT Special Hauling Permits for Oversize/Overweight Vehicles and NYSDOT Highway Work Permits will be left with the state agencies and not be issued by the Siting Board.

Special Hauling Permits for Oversize/Overweight Vehicles are required for loads that exceed legal dimensions or weights. Thus, transport of the blades, nacelles, tower sections, and cranes will require a variety of special hauling permits. The permits are typically obtained by the wind turbine supply vendor prior to construction and depend on the delivery routes. Delivery routes are selected, and may change, depending on the selected vendor as well as

road conditions, access concerns and other factors that are best determined immediately prior to the start of shipments.

In addition, NYSDOT Highway Work Permits depend on final delivery routes and conditions. As the Applicant finalizes delivery plans for Project components and detailed designs of the electrical system, details of crossings with state highways are likely to change. Therefore, the Applicant anticipates delaying receipt of the NYSDOT highway work permits until immediately prior to that start of construction.

3.33 Other Applications and Filings

The DPS has assigned Case Number 16-F-0062 to the Eight Point Wind Energy Center Project, based on the Applicant's initial filing on January 29, 2016. Beyond Case Number 16-F-0062, the Applicant does not have any other pending application or filing with the Board or with any other governmental department, agency or court of competent jurisdiction (state or federal) concerning the development of the Project.

Eight Point Wind is aware that on April 13, 2016, Canisteo Wind Energy NY, LLC (an affiliate of Invenergy Wind North America LLC (Invenergy)) filed a PIP with the DPS Staff for the Canisteo Wind Energy Center (CWEC). The CWEC (Case Number 16-F-205) is a 290.7 MW project proposed for development in Steuben County – including, in part, the Towns of Greenwood, Troupsburg and West Union where the Eight Point Wind Project is proposed. The effects of the two filings taking place within similar geographic areas are likely to include creating competition for leasing of available land, and capacity limitations for existing electrical infrastructure if the Projects propose to interconnect at the same substation.

In addition, Eight Point Wind is also aware that on February 26, 2015 Baron Winds, LLC (a subsidiary of EverPower Wind Holdings, LLC) filed a PIP with the NYS PSC for the Baron Winds Project (BWP). The BWP (Case Number 15-F-0122) is a proposed 300 MW project also in Steuben County; however, it is located in towns north of the Eight Point Wind Project Area and is not expected to overlap or impact either in land acquisition or transmission.

Both Canisteo Wind Energy, LLC and Baron Winds, LLC have been added to the Project stakeholders list.

Eight Point Wind will file for certification of the approximately 18-mile 115 kV generation tie line through a parallel but separate process pursuant to Article VII of the New York State PSL. The Eight Point Wind Energy Center relies on the generation tie line to transmit the generated wind energy to the NYISO system. Therefore, denial of the Article VII certification will result in the Project not being built. Likewise, the denial of an Article 10 Certificate for the Eight Point Wind Energy Center will result in the approximately 18-mile 115 kV generation tie line not being built.

FEDERAL INVOLVEMENT

Pursuant to 16 NYCRR § 1001.33(b), the following federal permits, consents, approvals, consultations or licenses may be required for construction or operation of the Project:

United States Fish and Wildlife Service:

- Endangered Species Act, Section 7 Consultation

United States Army Corps of Engineers:

- Endangered Species Act, Section 7 compliance
- National Historic Preservation Act, Section 106 compliance
- Section 404 or Nationwide Permit for Placement of Fill in Federal Jurisdictional Wetlands, Waters of the US

Federal Aviation Administration:

- Filing of FAA 7460-1 Notice of Proposed Construction or Alteration, and anticipated Determination of No Hazard (the filing is circulated to various affected stakeholders including local airports and the Department of Defense)
- Turbine Lighting Plan (filed once final turbine locations are determined).

The dates for these federal applications will be provided in the Application.

3.34 Electric Interconnection

Collection System

Each of the Project's wind turbine generators (WTG) will generate power at a low voltage (typically 690 volts) which will be stepped up to 34.5 kV by individual transformers at the base of each WTG. From the transformer, the power cables will collect the electricity produced by wind turbine generators to be connected through underground circuits. The electrical collection system will total approximately 30 miles in length and will typically be installed adjacent to Project access roads. Although underground cabling is the preferred option for the electrical collection system, overhead cables may be used where requested by landowners or where underground installation is prohibited or infeasible due to constraints such as rivers, streams or creek crossings, steep topography, bedrock etc.

The final routing of the collection system cables is dependent upon final turbine layout, land acquisition, access road layout, final collection substation siting and field surveys to minimize impacts to resources such as wetlands, forested areas and agricultural lands. In addition to the electrical cables, the collection system will include fiber optic cables that will connect the Project's supervisory control and data (SCADA) system for O&M communications. The final design of the 34.5 kV cable collection system will be provided in the Article 10 Application.

The collection system will terminate at a centrally located Project substation where the 34.5 kV power will once again be stepped up to 115 kV. Up to 102 MW of wind generated renewable energy will then be available for connection to the NYS power grid.

The collection substation is the terminus of the 34.5 kV collection system, which will likely consist of three to four incoming circuits, and will be located at the beginning of the 115 kV transmission line. The currently proposed Project substation location is an agricultural field near the intersection of Mahoney Road and Keenan Road in the Town of West Union. The Project substation transformer will increase the voltage of the buried collection system from 34.5 kV to 115 kV. The Project substation will include 34.5 and 115 kV busses, a transformer, circuit breakers, towers, a control building, and related structures, and will be enclosed by chain link fencing. The Project substation will occupy approximately 4 acres, and has been selected based on being located away from existing residences. A complete description and detailed design of the collection substation will be included in the Article 10 Application.

Interconnection Transmission

The Applicant proposes to construct an approximately 18-mile overhead 115 kilovolt (kV) transmission line to connect the Project substation to the POI facilities at NYSEG's 115 kV Bennett Substation in Hornellsville, New York. The Applicant has requested interconnection of the Project to the New York electric transmission system connecting to NYSEG's 115 kV

circuit. Under queue request Q422, the NYISO is currently studying the interconnection of up to 103 MW to the NYSEG system at the Bennett Substation, which would serve as the POI for the Project.

To accomplish this interconnection, NYSEG would install a new 115 kV breaker and its ancillary equipment will be added to an existing open bay in the NYSEG Bennett Substation. Corresponding metering, SCADA, communication protection and control would also be installed. Any other upgrades needed to maintain the system reliability would be completed prior to commencing operations.

Because the transmission line is greater than 100 kV and the length exceeds 10 miles, it will be permitted separately through the Article VII process. Article VII of the New York State Public Service Law sets forth a review process for the consideration of any application to construct and operate a Major Utility Transmission Facility and requires an applicant to apply for a Certificate of Environmental Compatibility and Public Need (“Certificate”) and meet the Article VII requirements before constructing the transmission line. Therefore, the need for, and environmental impact of, the 115 kV transmission line associated with the Eight Point Wind Energy Center will not be evaluated in the Article 10 Application. The Applicant anticipates the Article VII Application will be reviewed concurrently with the Article 10 Application.

The general configuration of the overhead electric interconnection line including its planned operating voltage, length, route, structure designs and construction impacts will be described in the Article 10 Application in order to provide an understanding of any overall Project cumulative impacts. Further details on the overhead interconnection proposed between the Project collection substation and the POI facilities at the Bennett Substation, including but not limited to: tower materials, designs, standards, dimensions, and foundations; conductor types, sizes, and materials; insulator designs; terminal facilities; additional switching equipment to be installed at the line end point; and the need for cathodic protection measures, will be included in the Article VII application.

3.35 Electric and Magnetic Fields

Electromagnetic fields (“EMF”) are generated by the operation of wind farm components such as the turbine generator, electrical collection lines, and transformers. EMF strength decreases with the square of the distance from the source (the electric charges or currents) for power lines and the cube of the distance from point sources such as substations. The height of the turbine generator above the ground, the location of electrical collection cables underground, the width of the transmission line ROW, and the location of substation transformers and other electrical equipment inside a restricted area provide separation of these components from the general public, wildlife, and livestock. As a result, EMF exposure from Project components is expected to be non-existent or very limited.

EMF Study

The New York State Public Service Commission issued EMF standards in 1990, and with these standards it described measurement methods for compliance. NEER will utilize these standards to guide the EMF study that will be included in both the Article 10 Application, as well as the Article VII Application which will be under concurrent review.

More specifically, the EMF study included in Exhibit 35 of the Application will model electric and magnetic field levels for the 115 kV interconnection line operating at summer/winter normal ratings (by manufacturer), summer/winter short-term emergency ratings, average annual load, voltage at 1.05 times the normal line rating, averaged for all hours of the year over the years in which case the circuit is expected to be carrying the highest annual load. For each case, the study will present predicted EMF levels at a point one meter above ground level for areas within 500 feet of the edge of the ROW.

To adequately address and evaluate potential adverse impacts from EMF, the Applicant will address all of the requirements of the Certificate Application contained within the requirements for Exhibit 35. This will include:

- Identification of every ROW segment having unique EMF characteristics;
- Proposed and “base case” cross-sections for each identified ROW segment;
- Aerial photo mapping that depicts the identified ROW segment, cross-section, nearest occupied structure, and distance between the right-of-way edge and the nearest edge of the identified structure;
- An EMF study with calculation tables and field strength graphs for each identified ROW segment cross section.

As mentioned above, the Applicant anticipates its electrical interconnection line will be located at a sufficient distance from existing structures so that any EMF levels that may be

produced are well below those which may be considered high enough to justify concerns for public safety.

3.36 Gas Interconnection

This requirement is not applicable to the Eight Point Wind Energy Center, as there are no Gas Interconnections included in the proposed Project.

3.37 Back-up Fuel

This requirement is most likely not applicable to the Eight Point Wind Energy Center, as there is typically no back-up fuel required for the proposed Project. The O&M building and the Project substation require power, which is typically provided by the local utility. If local distribution power is unavailable, a back-up generator may be required.

3.38 Water Interconnection

This requirement is not applicable to the Eight Point Wind Energy Center, as there are no public water supply interconnections required for the operation of the proposed Project. The O&M building will use a limited amount of potable water, comparable to a typical single family residence.

3.39 Wastewater Interconnection

This requirement is not applicable to the Eight Point Wind Energy Center, as there are no municipal wastewater interconnections required for the operation of the proposed Project. The O&M building may require a locally permitted septic system for disposal of restroom waste and wash water, which will be comparable to a typical single family residence.

3.40 Telecommunications Interconnection

The Project will require internet service at the Operations and Maintenance (O&M) Building to enable the central control center to monitor Project operating status continuously and to support business activities. The Project's transmission line will include fiber optic cabling, in addition to the 115 kV conductors, which will likely provide telecommunications and internet connections for the Project.

Exhibit 40 of the Application will describe the required bandwidth for these purposes, where physical connection would need to occur, what data networks and service providers are able to provide this service, the physical labor that would be required to provide this service, and the status of discussions and negotiations with service providers, if necessary.

Eight Point Wind anticipates that NYSEG will use a fiber system to communicate with and monitor the point of interconnection (POI) facilities. As part of developing the Application, Eight Point Wind will consult with NYSEG on its communication requirements. The results and data collected as a result of this coordination with NYSEG will also be included in Exhibit 40 of the Application.

3.41 Applications to Modify or Build-Adjacent

The Project is not proposed to modify, or be built adjacent to, an existing electric generating facility and therefore the requirements of Exhibit 41 are not applicable to the Project.

4.0 Summary and Conclusions

Eight Point Wind, a subsidiary of NEER, plans to submit an Application to construct a major electric generating facility, the Eight Point Wind Energy Center, under Article 10 of the Public Service Law (PSL). As required, the Applicant has prepared this Preliminary Scoping Statement (PSS) the purpose of which is to establish the methodology, scope of studies, or program of studies to be conducted in support of an application being submitted for the Project pursuant to Article 10. In support of this PSS, the Applicant has consulted with the public, affected agencies and other stakeholders, as required by 16 NYCRR § 1000.5(b). Such consultations have been documented and these meeting logs have been continually updated and submitted to the Siting Board on a regular basis. Input from this stakeholder outreach has helped to inform this PSS. The Applicant will continue to meet with the public, affected agencies and other stakeholders throughout the permitting process, and use that information to refine and improve the Project.

The Project Area addressed in this PSS is comprised of locations being evaluated for placement of permanent Project facilities. As shown in Figure 2, the Project Area is approximately 45,500 acres of land in the Towns of Greenwood, Troupsburg and West Union, in Steuben County New York. The Project will have a maximum generating capability of approximately 102 MW of power from an estimated 32 wind turbines located on land leased and/or purchased from others. The Applicant intends to construct, own, operate, and maintain all components of the Project, except for the point of interconnection facilities, which will be located within New York State Electric and Gas Corporation's Bennett Substation.

Project facilities will include the installation of up to 32 wind turbines, approximately 13 miles of access roads, approximately 30 miles of buried (and some overhead due to physical constraints) electric collection lines, a Project collection substation, 1-2 permanent met towers, an O&M building, electrical interconnection facilities, and up to three temporary construction staging areas.

The Applicant proposes to construct a Project substation, an approximately 18-mile overhead 115 kV transmission line, and POI improvements to NYSEG's 115kV Bennett Substation in Hornellsville, New York. Because the transmission line is greater than 100 kV and the length exceeds 10 miles, it will be permitted separately through the Article VII process. Therefore, the need for, and environmental impact of, the 115 kV transmission line associated with the Project will not be evaluated in the Article 10 Application. The Applicant anticipates that the Article VII Application will be reviewed concurrently with the Article 10 Application.

The proposed Project will have significant positive socioeconomic impacts in the Project Area, in New York and beyond through employment opportunities, specifically by generating

temporary development and construction employment. Once operational, the Project is estimated to provide approximately \$40 million in PILOT payment and/ Host Community Agreement payments, then property taxes over the 30-year expected life of the Project to local governments. In turn this money will support local schools, infrastructure, and vital services such as fire departments and other emergency response entities. Additionally, Eight Point Wind estimates that approximately six full-time permanent operations and maintenance jobs will be created to support the Project for the duration of its 30-year expected life.

By adding up to 102 MW of clean, renewable, wind power into the New York State energy market, the Project is consistent with the 2015 New York State Energy Plan and instrumental in meeting the NY 2030 Targets of 40% reduction in greenhouse gas emissions from 1990 levels and 50% of electricity generation from renewable energy sources. The Project will also improve fuel diversity within New York State by increasing the amount of electricity produced by wind generation facilities.

As wind energy generates electricity without emitting pollutants, one of the greatest advantages of wind energy production is the maintenance of air quality. While very minor levels of air emissions may be produced during construction activities, this technology allows for production of electricity without creating any gaseous, liquid, or solid wastes, and therefore eliminates the need to treat, collect, transport and dispose of such waste in any significant amount.

The Applicant has endeavored to provide as much information relative to the Project as is reasonably available per PSL 1000.5 (I). Table 14 below provides an overview of the PSL 100.5 (I) requirements and the corresponding section within this PSS where the information has been addressed.

Table 14. Content of Eight Point Wind PSS

PSL 1000.5(I) Section	Article 10 PSS Requirement	Corresponding Section of the Eight Point Wind PSS	Notes
PSL 1000.5 (I)(1)	as much information as is reasonably available concerning the proposed facility, generally in the form (though in less detail) that it will appear in the application;	Section 2.0	Sections 2.1, 2.2, 2.3, 2.4 and 2.5 contain reasonably available information related to existing conditions, potential impacts and minimization/mitigation.
PSL 1000.5 (I)(2)	a preliminary scope of an environmental impact analysis containing a brief discussion, on the basis of reasonably available information, of the following items:	Section 3	The detailed subsections of Section 3 (as described below) provide the preliminary scope of an environmental impact analysis based on currently available information.
PSL 1000.5 (I)(2)(i)	a brief description of the proposed facility and its environmental setting;	Section 2.2; Sections 2.3 and 3.03; Sections 3.04, 3.17, 3.19, 3.20, 3.21, 3.22, 3.23, 3.24, 3.25, 3.26, 3.27 and 3.28	Section 2.2 provides a brief description of the Project, Sections 2.3 and 3.03 provide locational information, while Sections 3.04, 3.17, 3.19, 3.20, 3.21, 3.22, 3.23, 3.24, 3.25, 3.26, 3.27 and 3.28 provide a brief description of its environmental setting
PSL 1000.5 (I)(2)(ii)	potentially significant adverse environmental and health impacts resulting from the construction and operation of the proposed facility including also an identification of particular aspects of the environmental setting that may be affected, including any material impacts or effects identified in consultations by the public, affected agencies, and other stakeholders, and a responsive analysis by the Applicant as to those issues identified in consultations;	Section 2.2, and 3.10; Sections 3.15, 3.17, and 3.19; Sections 3.12, 3.20, 3.21, 3.22, 3.23, 3.24, 3.25, 3.26, and 3.29	Sections 2.2 and 3.10 provide general information regarding Project benefits; Sections 3.15, 3.17 and 3.19 provide information regarding potential health impacts, and Sections 3.12, 3.20, 3.21, 3.22, 3.23, 3.24, 3.25, 3.26, and 3.29 provide information concerning potential adverse environmental impacts. As of the date of the filing of this PSS, no material impacts have been identified during any consultations.

PSL 1000.5(I) Section	Article 10 PSS Requirement	Corresponding Section of the Eight Point Wind PSS	Notes
PSL 1000.5 (I)(2)(iii)	the extent and quality of information needed for the application to adequately address and evaluate each potentially significant adverse environmental and health impact, including existing and new information where required, and the methodologies and procedures for obtaining the new information;	Section 3.0	Each section of the document presents the extent and quality of information anticipated for presentation in the corresponding Exhibit of the Article 10 Application.
PSL 1000.5 (I)(2)(iv)	for proposed wind-powered facilities, proposed or on-going studies during pre-construction activities and a proposed period of post- construction operations monitoring for potential impacts to avian and bat species;	Section 3.22	Section 3.22 presents information on existing conditions and on-going pre-construction avian and bat studies, as well as proposed post construction monitoring work plan.
PSL 1000.5 (I)(2)(v)	a description of how the applicant proposes to avoid adverse impacts to the environment and health;	Section 3.04, 3.06 and 3.09; Sections 3.12, 3.15, 3.17, 3.18, 3.19, 3.20, 3.21, 3.22, 3.23, 3.24, 3.26, 3.27, and 3.29	Sections 3.04, 3.06, and 3.09 provide information on impact avoidance and its role in siting of Project facilities. Sections 3.12, 3.15, 3.17, 3.18, 3.19, 3.20, 3.21, 3.22, 3.23, 3.24, 3.26, 3.27, and 3.29 describe avoidance and minimization measures to the environment and health.
PSL 1000.5 (I)(2)(vi)	for those adverse environmental and health impacts that cannot be reasonably avoided, an identification of measures proposed to mitigate such impacts;	Section 3.04, 3.06 and 3.09; Sections 3.12, 3.15, 3.17, 3.18, 3.19, 3.20, 3.21, 3.22, 3.23, 3.24, 3.26, 3.27, and 3.29	Sections 3.04, 3.06, and 3.09 provide information on impact avoidance and its role in siting of Project facilities. Sections 3.12, 3.15, 3.17, 3.18, 3.19, 3.20, 3.21, 3.22, 3.23, 3.24, 3.26, 3.27, and 3.29 describe avoidance and minimization measures to the environment and health.

PSL 1000.5(I) Section	Article 10 PSS Requirement	Corresponding Section of the Eight Point Wind PSS	Notes
PSL 1000.5 (I)(2)(vii)	where it is proposed to use petroleum or other back-up fuel for generating electricity, a discussion and/or study of the sufficiency of the proposed on-site fuel storage capacity and supply;	Currently not applicable to this Project	
PSL 1000.5 (I)(2)(viii)	a description and evaluation of applicable, reasonable and available alternative locations for the proposed facility, including a description of the comparative advantages and disadvantages of the proposed and alternative locations, except that a private facility applicant may limit its description and evaluation of alternative locations to parcels owned by, or under option to, such private facility applicant or its affiliates;	Section 3.09	Section 3.09 presents a discussion of Alternatives to the proposed Project and the selection process that has resulted in the current Project Area of approximately 45,500 acres.
PSL 1000.5 (I)(2)(ix)	If the proposed facility affects any land or water use or natural resource of the coastal area and federal authorization or funding is necessary, a preliminary analysis of the consistency of the proposed facility with the enforceable policies of the New York State coastal management program or, where the action is in an approved local waterfront revitalization program area, with the local program;	Not applicable to this Project	The Project location is not subject to Coastal Zone Consistency analysis

PSL 1000.5(I) Section	Article 10 PSS Requirement	Corresponding Section of the Eight Point Wind PSS	Notes
PSL 1000.5 (I)(2)(x)	a statement of the reasons why the primary proposed location and source, taking into account the potentially significant and adverse environmental impacts, is best suited, among the alternatives, including a "no action" alternative, to promote public health and welfare, including the recreational and other concurrent uses that the site may serve, except that a private facility applicant may limit its description and evaluation of alternative locations to parcels owned by, or under option to, such private facility applicant or its affiliates and its description and evaluation of alternative sources to those that are reasonable alternatives to the proposed facility that are feasible considering the objectives and capabilities of the sponsor;	Section 3.09	Section 3.09 presents a discussion of Alternatives to the proposed Project and the selection process that has resulted in the current Project Area of approximately 45,500 acres.

PSL 1000.5(I) Section	Article 10 PSS Requirement	Corresponding Section of the Eight Point Wind PSS	Notes
PSL 1000.5 (I)(2)(xi)	a preliminary identification of the demographic, economic and physical attributes of the community in which the facility is proposed to be located and in which any alternative location identified is located, and a preliminary environmental justice evaluation of significant and adverse disproportionate environmental impacts of the proposed facility and any alternative facility identified that would result from construction and operation considering, among other things, the cumulative impact of existing sources of emissions of air pollutants and the projected emission of air pollutants from the proposed or alternative facility in a manner that is in accordance with any requirements for the contents of an Article 10 preliminary scoping statement contained in 6 NYCRR Part 487 promulgated by the DEC for the analysis of environmental justice issues; and	Sections 3.27 and 3.28	Section 3.27 provides demographic information for the towns of Greenwood, West Union and Troupsburg. Section 3.28 addresses Environmental Justice, including identification of the nearest Potential Environmental Justice Areas.
PSL 1000.5 (I)(2)(xii)	an identification of any other material issues raised by the public and affected agencies during any consultation and the response of the applicant to those issues.	Appendix A	As of the date of filing this PSS, no material issues have been raised by the public or affected agencies during consultations. However, Appendix A of the PSS includes the most recently filed Meeting Log, which outlines all consultation activities conducted by the Applicant since filing the PIP.
PSL 1000.5 (I)(3)	an identification of all other state and federal permits, certifications, or other authorizations needed for construction, operation or maintenance of the proposed facility;	Sections 3.32 and 3.33	Section 3.32 addresses state laws and regulations. Section 3.33 addresses anticipated federal permits and approvals.

PSL 1000.5(I) Section	Article 10 PSS Requirement	Corresponding Section of the Eight Point Wind PSS	Notes
PSL 1000.5 (I)(4)	a list and description of all state laws and regulations issued thereunder applicable to the construction, operation or maintenance of the proposed facility and a preliminary statement demonstrating an ability to comply;	Section 3.32	Section 3.32 addresses state laws and regulations.
PSL 1000.5(I)(5)	a list and description of all local laws, and regulations issued thereunder, applicable to the construction, operation, or maintenance of the proposed facility and a statement either providing a preliminary assessment of an ability to comply or indicating specific provisions that the applicant will be requesting the Board to elect not to apply, in whole or in part, and a preliminary explanation as to why the Board should elect not to apply the specific provisions as unreasonably burdensome in view of the existing technology or the needs of or costs to ratepayers whether located inside or outside of such municipality;	Section 3.31	Section 3.31 addresses local laws and ordinances.
PSL 1000.5 (I)(6)	a description of the applicant, its formation, status, structure, holdings, affiliate relationships, powers (including whether it has or will seek to obtain the power of eminent domain, either directly or indirectly), franchises and consents;	Sections 2.1 and 3.01	Sections 2.1 and 3.01 provide information on the Applicant, its parent company, and its formation. The Applicant does not plan to seek to obtain the power of eminent domain.

PSL 1000.5(I) Section	Article 10 PSS Requirement	Corresponding Section of the Eight Point Wind PSS	Notes
PSL 1000.5 (I)(7)	a description of the applicant's property rights and interests or those it proposes to acquire to all lands of the proposed facility and any private or public lands or private or public streets, highways or rights-of-way crossed by any interconnections necessary to serve the facility such as, but not limited to, electric lines, gas lines, water supply lines, waste water or other sewage treatment facilities, communications and relay facilities, access roads, rail facilities, or steam lines; and	Section 3.13	Section 3.13 provides information concerning the Applicant's property rights and interests.
PSL 1000.5 (I)(8)	any other information that the Applicant may deem to be relevant.	Throughout the PSS document	The document contains additional information beyond the base requirements of PSL 1000.5 Any other information deemed relevant by the Applicant has been included in the PSS.

5.0 References

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