

Draft Stipulations

Eight Point Wind Energy Center

Case 16-F-0062

June 30, 2017

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NEW YORK STATE BOARD ON ELECTRIC GENERATION
SITING AND THE ENVIRONMENT

IN THE MATTER OF:

Case No.: 16-F-0062

Application of Eight Point Wind, LLC for a Certificate of
Environmental Compatibility and Public Need Pursuant
to Article 10 to Construct 103.4 MW Wind Energy Project

General Matters

THE PARTIES HERETO stipulate and agree as follows:

- (1) The Eight Point Wind Energy Center Project (“Project”) is discussed in an Article 10 Preliminary Scoping Statement (“PSS”) submitted to the New York State Board on Electric Generation Siting and the Environmental (“Siting Board”) on October 11, 2016 by Eight Point Wind, LLC (“Applicant”). The term “Project” as used herein includes the wind turbines, access roads, buried and overhead electric collection lines, a Project collection substation, permanent meteorological towers, an operation and maintenance (“O&M”) building, and temporary construction staging/laydown areas, as well as any other improvements subject to the Siting Board’s jurisdiction.
- (2) The term “Project” as used herein does not include electric transmission facilities subject to review under Article VII of the PSL and that are not subject to the Siting Board’s jurisdiction under N.Y. Public Service Law (“PSL”) Article 10. Such Article VII facilities will include an approximately 16-mile overhead 115 kV transmission line to be constructed to connect the Project to the New York transmission grid that will be evaluated and certificated through a parallel and separate Article VII process. The dead-end structure adjacent to the fence line between the Project collection substation and the 115 kV transmission line shall be the demarcation point between the Project and the Article VII facilities. The Article VII facilities will terminate at the Point of Interconnection (POI) at NYSEG’s Bennett Substation.
- (3) Unless relief is requested by the Applicant to the Siting Board, after consultation with the signatory parties, and the relief is granted by the Siting Board, the Applicant will present the studies, evaluations, and analyses as set forth in these stipulations to satisfy the application requirements of PSL Article 10. These stipulations are governed by Section 163 of the PSL and by any applicable requirements for federally delegated environmental permits issued by the New York State Department of Environmental Conservation (“DEC”).

- (4) Parties hereto may limit their concurrence to one or more of the 41 specific subject area stipulations by so indicating in a notation next to their signature. A signature without this notation shall indicate concurrence with the entire stipulation.
- (5) Those signing these stipulations agree that, as of the date hereof, the studies outlined in these stipulations constitute all the necessary studies concerning the subject matter of these stipulations that the Applicant must provide to satisfy Section 164.1 of the PSL. Except as provided herein, and in accordance with 16 NYCRR § 1000.5(k), the signatories agree not to request that the Applicant provide additional studies concerning the subject matter of these stipulations in connection with the Article 10 proceeding. The Applicant recognizes that the results of studies may show that some limited level of additional analysis may be necessary to identify appropriate measures to avoid, minimize, mitigate or offset impacts.
- (6) Under any of these following circumstances, the Applicant agrees to perform additional studies, evaluations, or analyses:
 - (a) A new statute, regulation or final, non-reviewable judicial, federal, state or administrative regulation, ruling or order is adopted subsequent to the date of these stipulations which necessitates such additional studies, evaluations or analyses;
 - (b) The Applicant proposes a change in the Project or other inputs to the stipulated studies, evaluations, or analyses that will materially affect the results of the studies, evaluations or analyses;
 - (c) New information is discovered during the course of conducting, or as a result of, the stipulated studies, evaluations or analyses that materially affect the results thereof; or
 - (d) The chairman of the Siting Board, the Siting Board, or the presiding examiner, whose ruling will be appealable to the Siting Board, or associate examiner presiding with respect to any proceedings concerning federally delegated environmental permits to be issued by the DEC, whose ruling will be appealable to the Commissioner of the DEC or the Siting Board, as the case may be, requires an additional study, evaluation, or analysis pursuant to 16 NYCRR § 1000.9.
- (7) After the chairman of the Siting Board determines that the Article 10 Application (“Application”) complies with Section 164 of the PSL, if the signatories, in any of the circumstances listed above, reach agreement as to the implementation of any additional studies, evaluations, or analyses, such agreement may be set forth in a new stipulation, which may include the agreement of the Applicant to extend the statutory deadline for completion of the certification proceeding, but only if and only to the extent necessary to provide sufficient time to permit any such studies, evaluations, or analyses to be conducted and reviewed. Any of the signatories, in the circumstances listed in paragraph 5, who do not reach such agreement, shall be free to submit the matter to the presiding examiner for resolution and shall not be restricted from pleading that the Applicant must

provide additional studies evaluations or analyses related thereto during the Article 10 proceeding regarding the subject matter of these stipulations.

- (8) The Applicant will comply with Application filing requirements associated with:
- (a) Official notices are provided to each municipality, state legislature members, and persons having filed a statement with the secretary within the past 12 months wishing to receive all such facility notices, listed as necessary to serve the proposed and/or alternative facility site locations. Official notices shall be serviced, filed, and support administrative matters outlined at 16 NYCRR § 1000.7;
 - (b) A discussion of water quality certification procedural steps are included as defined at 16 NYCRR § 1000.8, pursuant to Section 401 of the Clean Water Act;
 - (c) An intervenor funding fee in the amount specified at 16 NYCRR § 1000.10, is included as part of the pre-application provisions.

Stipulation 1 – 1001.1 General Requirements

The following shall apply to each of the exhibits to the Application:

- (a) The application for a certificate shall contain the exhibits described by Part 1001 as relevant to the Project technology and site, and such additional exhibits and information as the Applicant may consider relevant or as may be required by the Siting Board or the Presiding Examiner. Exhibits that are not relevant to the particular application have been omitted.
- (b) Each exhibit shall contain a title page showing:
 - (1) The Applicant's name.
 - (2) The title of the exhibit.
 - (3) The proper designation of the exhibit.
- (c) Formatting:
 - (1) Each exhibit consisting of 10 or more pages of text shall contain a table of contents citing by page and section number or subdivision the component elements or matters contained in the exhibit.
 - (2) Each exhibit which includes reference or supporting documents such as attachments or appendices shall contain a table of contents that indicates those supporting documents. The location of information within the Application (including exhibits, attachments and appendices, specifically addressing the relevant requirements of 16 NYCRR § 1001) will be clearly identified either in the table of contents or in the form of a matrix in order to ensure completeness and facilitate review.
- (d) In collecting, compiling and reporting data required by 16 NYCRR Part 1001, the Applicant shall establish a basis for statistical comparison with data which shall subsequently be obtained under any program of post-construction monitoring.
- (e) If the same information is required for more than one exhibit, it may be supplied in a single exhibit and referenced in other exhibit(s) where it is also required.
- (f) Exhibit 1 shall also contain:
 - (1) The name, address, telephone number, facsimile number, and E-mail address of Eight Point Wind, LLC.
 - (2) The address of the website established by the Applicant to disseminate information to the public regarding the Application.
 - (3) The address, telephone number, facsimile number, and E-mail address of David Gil, who is the person that the public may contact for more information regarding the application.

- (4) The business address, telephone number, facsimile number, and e-mail address of the principal officer of the Applicant, John DiDonato, Vice President.
- (5) If the Applicant desires service of documents or other correspondence upon an agent, the name, business address, telephone number, facsimile number, and E-mail address of the agent.
- (6) A brief explanation of Eight Point Wind, LLC, a wholly-owned, indirect subsidiary of NextEra Energy Resources, LLC (“NextEra”), including its date and location of formation and the name and address of its parent.
- (7) A certified copy of the certificate of formation for Eight Point Wind, LLC, will be provided with the Application.

Stipulation 2 – 1001.2 Exhibit 2: Overview and Public Involvement

Exhibit 2 shall not exceed 15 pages of text, except that for good cause shown, the Secretary may increase the page limit. Exhibit 2 shall contain:

- (a) A brief description of the major components of the Project, including all proposed turbine locations and the footprint of all other components. The Application will provide any facility component dimensions given in meters by the equivalent value in feet.
- (b) A brief summary of the contents of the Application, except those exhibits which do not apply to the proposed Project.
- (c) A brief description of the Public Involvement Program (“PIP”) plan conducted by the Applicant prior to submission of the Application and an identification of significant issues raised by the public and affected agencies during such program and the response of the applicant to those issues including a summary of changes made to the proposal as a result of the public involvement program. Specific components of the PIP conducted to date and the topics addressed will be discussed, including: opportunities for public involvement; development and use of stakeholder list (including host and adjacent landowners); the Applicant’s efforts relating to language access; identification of any environmental justice areas; the use of document repositories; consultation with affected agencies and stakeholders, factsheets on the Article 10 process and intervenor funding and other outreach materials; use of meeting logs; and the establishment of a Project website (www.EightPointWind.com), a local office and local telephone number.
- (d) A brief description of the public involvement program to be conducted by the Applicant after submission of the Application, such as hearings, notification of construction activities, complaint resolution procedures, etc. The Applicant will also provide an updated stakeholders list, including host and adjacent landowners. The Application will include an indication of how stakeholders have been identified and subsequently added to the list during the scoping and stipulation process and briefly describe how the list will be used for distribution and notification regarding Project milestones, including submittal of the Application. In addition to notifications required under 16 NYCRR 1000.6 and 1000.7, the Applicant should mail notice of the Application submittal to a project mailing list comprised of the updated stakeholders list, including host and adjacent landowners, and additional addresses received through public outreach. The notice will include information on the project generally and the Article 10 Application specifically. A copy of the mailing list and documentation indicating the dates and mailings that were made will be provided to the Secretary of the Siting Board.
- (e) A brief, clearly and concisely written analysis in plain language that presents the relevant and material facts regarding the proposed Project which the Applicant believes the Siting Board should use as the basis for its decision. The analysis shall be analytical and not encyclopedic and shall specifically address each required finding, determination and consideration the Siting Board must make or consider in its decision pursuant to Section 168 of the PSL, and explain why the Applicant believes the requested Certificate should be granted.

- (f) The Applicant will ensure that paper copies of major Project documents, except those subject to protective order, are properly filed at the designated local repositories, which include the coming Project Local Office, Canisteo Town Hall, Greenwood Town Hall, Troupsburg Town Hall, West Union Town Hall, Jasper Free Library, Jasper Town Hall, Hornell Public Library, Wimodaughasian Free Library, Hartsville Town Hall, Hornellsville Town Hall, City of Hornell Public Library, and Herrick Memorial Library.

- (g) Further, the Applicant will ensure that electronic copies of all major Project documents, except those subject to a protective order, can be accessed (1) on the New York State Department of Public Service (“DPS”) online case record website and (2) on a Project-specific website created and maintained by the Applicant (www.EightPointWind.com).

Stipulation 3 – 1001.3 Exhibit 3: Location of Facilities

Exhibit 3 shall contain maps, drawings and explanations showing the location of the proposed Project, all onsite interconnections not subject to N.Y. Public Service Law Article VII, and all ancillary features not located on the facility site such as roads, railroads, switchyards, fuel or energy storage or regulation facilities, solid waste disposal areas, waste treatment and disposal facilities, and similar facilities, in relation to municipalities (county, city, town and village) and taxing jurisdictions associated with any part of the overall development proposal. Such maps, drawings and explanations shall include:

- (a) The most recent USGS maps (1:24,000 topographic edition) reproduced at original scale showing:
 - (1) The proposed location of the Project and locations of all Project components and available alternative locations sites required to be identified, including wind turbines; meteorological towers; access roads; individual circuits of all buried and overhead collector lines; laydown/staging areas; O&M building; collector substation; and temporary concrete batch plant (if necessary).
 - (2) The proposed location of any interconnections, including water supply lines, wastewater lines, communications lines, steam lines, stormwater drainage lines, and appurtenances thereto, to be installed in New York State connecting to and servicing the site of the Project that are not subject to the Commission's jurisdiction under PSL Article VII.
 - (3) The location of all proposed ancillary features not located on the Project site such as roads, fuel or energy storage or regulation facilities, solid waste disposal areas, waste treatment and disposal facilities, and similar facilities, that are not subject to the Board's jurisdiction under PSL Article 10.
 - (4) The proposed location of any electric transmission facility subject to review under Article VII of the PSL and that are not subject to the Board's jurisdiction under PSL Article 10. This will include an approximately 16-mile overhead 115 kV transmission line to be constructed to connect the Project to the New York transmission grid that will be evaluated and certificated through a parallel and separate Article VII process.
 - (5) The study areas for the Project generally related to the nature of the technology and the setting of the proposed site. For wind power facilities with components spread across a rural landscape, the Study Area shall include the area within a radius of at least five miles from all facility components, related facilities, and alternative location sites. For facilities in areas of significant resource concerns, the size of a study area shall be configured to address specific features or resource issues.

Note that proposed locations of all Project components will also be identified on aerial photos (Environmental Systems Research Institute aerial photos). Aerial photographs will meet the scaled reference of 1:24,000 unless components would otherwise be

deemed ineffective, at which point these components will be depicted at larger scales. Note that municipal boundaries will be obtained from NYS GIS Clearinghouse and ESRI and provided on appropriate mapping. In general, maps submitted with the Application will be prepared at one of three scales (1:1,200, 1:24,000, or 1:63,360 scales) depending upon the subject matter being represented. Depending on the subject matter, variations to these general scales may be utilized in order to clearly depict to the viewer the relationship between Project components and the resources being evaluated. A list of maps and proposed map scales and sizes is included as Attachment A.

- (b) Written descriptions explaining the relation of the location of the proposed Project site, the onsite non-Article VII interconnections, and all ancillary features not located on the facility site to the affected municipalities, taxing jurisdictions, designated neighborhoods or community districts.

Stipulation 4 – 1001.4 Exhibit 4: Land Use

Exhibit 4 shall contain:

- (a) A scaled map showing Project facilities in relation to existing land uses within the Study Area (area within a 5-mile radius from all facility components) using publicly available data from the Steuben County GIS Department. The “Steuben County Parcel Data” data set, derived from the Property Class attribute, was utilized to produce the scaled map. The Study Area includes approximately 145,663 acres of land (inclusive of the 15,295-acre Project Area).
- (1) Land use classifications codes of the New York Office of Real Property Services will be used to inventory existing land uses within the Study Area. For the Application, the land use will be further discussed, refined, and mapped based on site-specific investigations and documentation. Land use types will be identified as:
 - 100 – Agricultural;
 - 200 – Residential;
 - 300 – Vacant Land; (“vacant” land that is identified for Project facility sites and directly adjacent properties will be further broken down by usage i.e. timber, pasturing, hunting etc. based on input from landowners).
 - 400 – Commercial;
 - 500 – Recreation and Entertainment;
 - 600 – Community Services;
 - 700 – Industrial;
 - 800 – Public Services; and
 - 900 – Wild, Forested, or Conservation Lands and Public Parks.
- (b) In addition to land use maps, communications towers, and existing overhead or underground lines for electric, gas or telecommunications companies will be mapped within the Study Area.
- (c) A scaled map of all properties upon which any component of the Project or the related facilities would be located, and all properties within 2,000 feet of such properties, that shows the current land use, tax parcel number and owner of record of each property, and any publicly known proposed land use plans for any of these parcels will be mapped using data from the Steuben County GIS Department.
- (d) A scaled map of existing and proposed zoning districts within the Study Area of all facility components will be created by data obtained from local governments including a description of the permitted and prohibited uses within each zone.

- (e) A statement as to whether any relevant municipalities have adopted comprehensive plans and whether the Project is consistent with such plans.
- (f) A scaled map of all publicly known proposed land uses within the Study Area, gleaned from interviews with state and local planning officials, from the public involvement process, or from other sources.
- (g) Scaled maps showing, agricultural districts, flood prone zones, and recreational/sensitive areas designated pursuant to the State Environmental Quality Review Act and the NYS Forest Tax Law (N.Y. Real Property Tax Law § 480-a). Agricultural districts will be specified as Agricultural District 1 or 10 (Towns of Greenwood and West Union), as designated by Agricultural and Markets regulations. Flood hazard areas will be specified according to data from the Flood Emergency Management Agency (FEMA) Flood Insurance Rate Maps. There are no designated inland waterways, coastal areas, local waterfront revitalization program areas, critical environmental areas, or groundwater management zones within the Study Area of the Project.
- (h) Scaled maps showing:
 - (i) recreational and other land uses within the Study Area that might be affected by the sight, sound or odor of the construction or operation of the facilities, onsite non-Article VII interconnections and related facilities, including any wild, scenic and recreational river corridors, open space and any known archaeological, geologic, historical or scenic area, park, designated wilderness, forest preserve lands, conservation easement lands, scenic byways designated by the federal or state governments, nature preserves, designated trails, and public-access fishing areas;
 - (ii) major communication and utility uses and infrastructure;
 - (iii) institutional, community and municipal uses and facilities; and
 - (iv) a statement, including a summary, describing the nature of the probable environmental impacts of facility and onsite non-Article VII interconnection construction and operation on such uses, including an identification of how such impacts are avoided or, if unavoidable, minimized or mitigated. Given the provisions of § 304 of the National Historic Preservation Act, 9 NYCRR § 427.8, and § 15 of the PSL, information about the location, character, or ownership of a cultural resource shall not be disclosed to the public, and shall only be disclosed to the parties to a proceeding pursuant to an appropriate protective order if a determination is made that disclosure may:
 - (1) Cause a significant invasion of privacy,
 - (2) Risk harm to the affected cultural resource, or
 - (3) Impede the use of a traditional religious site by practitioners.
- (i) A qualitative assessment of the compatibility of the facilities with existing proposed and allowed land uses, and local and regional land use plans. The assessment will evaluate short- and long-term effects of facility-generated noise, odor, traffic and visual impacts on the use and enjoyment of areas within one mile of Project facilities. 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.

- (j) A qualitative assessment of the compatibility of proposed above-ground, onsite non-Article VII interconnections and related facilities with existing, potential, and proposed land uses within the Study Area.
- (k) A qualitative assessment of the compatibility of underground interconnections and related facilities with existing, potential, and proposed land uses within 300 feet from the centerline of such interconnections or related facilities.
- (l) The Project is not within a designated coastal area or in direct proximity of a designated inland waterway. Therefore, the parties agree that a demonstration of conformance with the Coastal Zone Management Act is not applicable and will not be included in the Application.
- (m) Aerial photographs of all properties within the Study Area will be shown at a scale of 1:12,000 in order to provide detail, discrimination and identification of natural and cultural features.
- (n) Overlays on aerial photographs which clearly identify the Project site with all proposed Project facilities, access roads and limits of clearing, in order to show the relationships with existing structures and vegetation cover types.
- (o) All aerial photographs shall reflect the current situation. All aerial photographs shall indicate the photographer and the date photographs were taken.
- (p) A description of community character within the Study Area, an analysis of impacts of facility construction and operation on community character, and identification of avoidance or mitigation measures that will minimize adverse impacts on community character.

Stipulation 5 – 1001.5 Exhibit 5: Electric System Effects

Exhibit 5 shall contain:

- (a) A system reliability impact study, performed in accordance with the open access transmission tariff of the New York Independent System Operator, Inc. (“NYISO”) approved by the Federal Energy Regulatory Commission, that shows expected flows on the system under normal, peak and emergency conditions and effects on stability of the interconnected system, including the necessary technical analyses (Thermal, Voltage, Short Circuit and Stability) to evaluate the impact of the interconnection. The study shall include the new electric interconnection between the Project, the electric transmission facilities subject to review under Article VII of the PSL and that are not subject to the Siting Board’s jurisdiction under N.Y. Public Service Law (“PSL”) Article 10 and the point of interconnection, as well as any other system upgrades required.
- (b) An evaluation of the potential significant impacts of the Project, the electric transmission facilities and their interconnection to transmission system reliability at a level of detail that reflects the magnitude of the impacts.
- (c) A discussion of the benefits and detriments of the Project and the electric transmission facilities on ancillary services and the electric transmission system, including impacts associated with reinforcements and new construction necessary as a result of the facility.
- (d) An analysis of any reasonable alternatives that would mitigate adverse reliability impacts and maintain voltage, stability, thermal limitations, and short circuit capability at adequate levels.
- (e) An estimate of the increase or decrease in the total transfer capacity across each affected interface, and if a forecasted reduction in transfer capability across affected interfaces violates reliability requirements, an evaluation of reasonable corrective measures that could be employed to mitigate or eliminate said reduction.
- (f) A description of criteria, plans, and protocols for generation and ancillary facilities design, construction, commissioning, and operation, including as appropriate to generation technology:
 - (1) Engineering codes, standards, guidelines and practices that apply.
 - (2) Generation facility type certification.
 - (3) Procedures and controls for facility inspection, testing and commissioning.
 - (4) Maintenance and management plans, procedures and criteria.
- (g) The Project and the electric transmission facilities will not have a thermal component, and therefore, heat balance diagrams are not applicable and will not be included in the Application.

- (h) A description of:
 - (1) A statement concerning substation ownership. At this time the Applicant does not anticipate any transfer in ownership of the Project collection substation. The Article VII facilities will begin outside of the Project collection substation's exterior fence line and terminate at the Point of Interconnection (POI) at NYSEG's Bennett Substation.
 - (2) A statement, or evidence, that the interconnection substation design will meet the transmission owner's requirements
 - (3) A statement, or evidence, that the operational and maintenance responsibilities for the interconnection substation will meet the transmission owner's standards.
- (i) Facility maintenance and management plans, procedures and criteria, specifically addressing the following topics:
 - (1) Turbine maintenance, safety inspections, and tower integrity.
 - (2) Electric transmission, gathering and interconnect line inspections, maintenance, and repairs, including:
 - (i) vegetation clearance requirements;
 - (ii) vegetation management plans and procedures;
 - (iii) inspection and maintenance schedules;
 - (iv) notification and public relations for work in public right-of-way; and
 - (v) minimization of interference with electric and communications distribution systems.
- (j) Vegetation management practices for collection and interconnect lines, switchyard and substation yards, and for danger trees (trees that due to location and condition are a particular threat to fall on and damage electrical equipment) around stations, specifications for clearances, inspection and treatment schedules, and environmental controls to avoid off-site effects.
- (k) A list of the criteria and procedures by which proposals for sharing above ground facilities with other utilities will be reviewed if applicable.
- (l) A status report on equipment availability and expected delivery dates for major components including towers, turbines, transformers, and related major equipment.
- (m) Wind energy generation facilities do not have blackstart capabilities. Therefore, this description is not applicable to the Project.
- (n) An identification and demonstration of the degree of compliance with all relevant applicable reliability criteria of the Northeast Power Coordinating Council Inc., New York State Reliability Council, and the local interconnecting transmission utility, including any criteria regarding blackstart and fuel switching capabilities. These

appropriate criteria will be identified in the SRIS or through consultation with DPS, NYISO, and the local transmission owners.

Stipulation 6 – 1001.6 Exhibit 6: Wind Power Facilities

Exhibit 6 shall contain:

- (a) A statement of all setback requirements and/or setback recommendations for turbines from roads, occupied structures (dwellings, commercial, industrial, and institutional), barns and unoccupied structures, areas of public gathering, and electronic transmission lines, explaining the rationale for the setback distances for each type, as required or recommended by:
 - (1) The manufacturer's specifications.
 - (2) The Applicant.
 - (3) Any local ordinance or law.

The Applicant will utilize standard setbacks throughout the Project Area which will meet or exceed the most restrictive setbacks of the host municipalities. The Applicant will site turbines no closer than 1.5 times turbine height in relation to electric transmission lines operating at 115 kV or greater (including the proposed Article VII facilities).

- (b) A detailed explanation of the degree to which the Applicant has accommodated in the facility layout the required and/or recommended turbine setbacks required to be stated in subdivision (a) of this stipulation. Scaled mapping (approximately 1:2,400 or similar) of turbine layouts encompassed by various setback requirements will include:
 - a. Residences
 - b. Applicant standard setback distances
 - c. Right-of-ways
 - d. Property lines
 - e. Built structures
 - f. Roads
 - g. Wetlands
 - h. Sound level criteria
- (c) Documentation regarding the status and results of third-party review and certification (type and site) of wind turbines proposed for construction and operation at the electric plant.
- (d) Wind meteorological analyses demonstrating adequate wind conditions supporting the estimated capacity factor for the Project. Results of wind meteorological analyses are proprietary and are typically retained as trade secrets. Therefore, a copy of the wind

meteorological analysis will be provided with the Article 10 Application but will be provided to the DPS Records Access Officer pursuant to the regulations for confidential treatment of business trade secrets under separate cover. The Applicant will seek the requisite trade secret protection for this information pursuant to N.Y. Public Officer's Law ("POL") Section 87(2)(d) and 16 NYCRR § 6-1.3. The Article 10 Application will provide non-proprietary information to demonstrate adequate wind conditions for the Project and discuss the estimated capacity factor.

Stipulation 7 – 1001.7 Exhibit 7: Natural Gas Power Facilities

This requirement is not applicable to the Project as there are no Natural Gas Power Facilities included in the proposed Project.

Stipulation 8 – 1001.8: Exhibit 8: Electric System Production Modeling

Prior to preparing this exhibit, the Applicant will consult with DPS and DEC to develop an acceptable input data set, including modeling for the Applicant’s proposed Project and inputs for the emissions analysis, to be used in the simulation analyses.

Exhibit 8 shall contain:

- (a) The following analyses that shall be developed using GEMAPS, PROMOD or a similar computer-based modeling tool:
 - (1) Estimated statewide and regional levels of sulfur dioxide (“SO₂”), nitrogen oxide (“NO_x”) and carbon dioxide (“CO₂”) emissions, both with, and without the proposed Project.
 - (2) Estimated minimum, maximum, and average annual spot prices representative of all NYISO Zones within the New York Control Area, both with and without the proposed facility.
 - (3) An estimated capacity factor for the Project.
 - (4) Estimated annual and monthly, on peak, shoulder and off-peak MW output capability factors for the facility.
 - (5) Estimated average annual and monthly production output for the facility in MWhs.
 - (6) An estimated production curve for the facility over an average year.
 - (7) An estimated production duration curve for the facility over an average year.
 - (8) Estimated effects of the proposed facility on the energy dispatch of existing must-run resources, defined for this purpose as existing wind, hydroelectric and nuclear facilities, as well as co-generation facilities to the extent they are obligated to output their available energy because of their steam hosts.
- (b) Digital copies of the inputs, used in the simulations required in subdivision (a) of this stipulation. The Applicant will seek trade secret protection for this information pursuant to POL Section 87(2) (d) and 16 NYCRR § 6-1.3.

Stipulation 9 – 1001.9 Exhibit 9: Alternatives

Alternatives analysis shall be limited to sites owned or leased by, or under option to the Applicant.

Exhibit 9 shall contain:

- (a) Given that the Applicant proposes to operate a private facility, the identification and description of reasonable and available alternative location sites for the proposed Project will be limited to sites under option to the Applicant for the wind energy Project, as authorized by 16 NYCRR § 1001.9(a).
- (b) As indicated in subdivision (a), analysis of alternative locations will be limited to sites under option to the Applicant for the wind energy Project. The general site selection process and Project details will be provided.
- (c) A description and evaluation of reasonable alternatives to the Project at the primary proposed location. This section of the Application will provide details on the following other alternatives:
 - (1) Alternative scale and number of wind turbines, i.e., same scale turbines greater or less in number, and smaller machines greater in number.
 - (2) Alternative Project configurations, such as turbines and other facility locations; spacing, wake losses/Project optimization; and local ordinances, setbacks and available land.
 - (3) Alternative turbine locations, with consideration to non-participating properties, based on analysis of visual, cultural, and noise impact analyses to avoid or minimize proposed impacts.
 - (4) No build alternative.
- (d) A statement of the reasons why the proposed Project location is best suited, among other alternative locations and measures submitted in this Exhibit, to promote public health and welfare, including recreational, cultural and other concurrent uses which the site and affected areas may serve.
- (e) A statement of the advantages and disadvantages of the aforementioned alternatives and the reasons why the primary proposed design technology, scale or magnitude, and timing are best suited, among the alternatives, to promote public health and welfare, including recreational, cultural and other concurrent uses that the site may serve.
- (f) A description and evaluation of the no action/no build alternative at the primary proposed location including the reason why the proposed Project is better suited to promote public health and welfare, including recreational, cultural and other concurrent uses that the site may serve.

- (g) An identification and description of reasonable alternate energy supplies will be limited to those that are feasible based on the objectives and capabilities of the Applicant (*i.e.*, wind powered electric generation).
- (h) Due to the nature of the Project (wind powered electric generation), transmission and demand-reducing alternatives will not be evaluated in the Application.
- (i) A statement of the reasons why the proposed Project is best suited to promote public health and welfare.

Stipulation 10 – 1001.10 Exhibit 10: Consistency with Energy Planning Objectives

Exhibit 10 shall contain:

Consistency with energy planning will extend to out-of-state contracts and/or delivery as deemed necessary.

- (a) A statement demonstrating the degree of consistency of the construction and operation of the Project with the energy policies and long range energy planning objectives and strategies contained in the most recent state energy plan, and any publicly available draft new state energy plan including consideration of the information required by subdivisions (b) through (i) in this stipulation.
- (b) A description of the impact the proposed Project would have on reliability in the state; provided, however, this description may be submitted when the SRIS required by Stipulation 5 is submitted.
- (c) A description of the impact the proposed Project would have on fuel diversity in the state.
- (d) A description of the impact the proposed Project would have on regional requirements for capacity.
- (e) A description of the impact the proposed Project would have on electric transmission constraints.
- (f) The proposed Project will generate electricity without the use of fuel. Therefore, there will be no adverse fuel delivery impacts and this topic will not be addressed in the Application.
- (g) A description of the impact the proposed Project would have in relation to any other energy policy or long range energy planning objective or strategy contained in the most recent state energy plan.
- (h) An analysis of the comparative advantages and disadvantages of reasonable and available alternative locations or properties which analysis will be limited to sites under option to the Applicant for the wind energy Project, as authorized by 16 NYCRR § 1001.9(a).
- (i) This section is not applicable because it requires an evaluation of alternative locations and fuel sources, which is beyond the scope of Exhibit 9 of the Application.

Stipulation 11 – 1001.11 Exhibit 11: Preliminary Design Drawings

All drawings prepared in support of Exhibit 11 of the Article 10 Application will be prepared using computer software (e.g., AutoCAD, etc.), will be labeled “preliminary” and “not for construction purposes” and will be prepared under the direction of a professional engineer, landscape architect, or architect who is licensed and registered in New York State. Four full-size copies of the drawing set, utilizing a common engineering scale, will be provided to DPS Staff. All other printed copies (included with the Application) will be at a legible and reduced size (i.e., 11” x 17” sheets), also utilizing a common engineering scale (for example: 1” = 60’; 1” = 100’; or 1” = 200’). Additionally, a CD-ROM containing AutoCAD, etc. files will be submitted to DPS Staff. Exhibit 11 shall contain:

Exhibit 11 shall contain:

- (a) Site plan drawings of all Facility components at a common engineering scale (e.g., 1” = 100’) as listed at 16 NYCRR § 1001.11(a). Adjoining property will be depicted using publicly available data. Specific to the Project, the Site Plan drawings will include the following features:
 - i. Turbine foundations, tower outline, and crane pads;
 - ii. Applicant’s proposed setbacks for each turbine from occupied structures, non-participating property lines, existing and proposed transmission lines, and roads (each setback will be represented as a unique line-type or color);
 - iii. Access road travel lanes (temporary and permanent);
 - iv. Turn-around areas to be used during turbine deliveries;
 - v. Proposed temporary (grading for construction purposes) and permanent contours (final grading);
 - vi. Collection lines - the required number of circuits will be indicated on Site Plans for each collection line route location; also, overhead and underground cable routes will be differentiated with specific line-types);
 - vii. Limits of disturbance for all facility components (turbines, access roads, buildings, etc.);
 - viii. Clearing limits for all the Project components (turbine, access roads, buildings, etc.);
 - ix. Outlines of permanent Right-of-Way (ROW) for all cable installations;
 - x. Project collection substation outline, including access driveway and fence line;
 - xi. Proposed locations that will utilize trenchless methods of cable installations (include laydown areas and approximate trenchless installation distances);

- xii. Operations and Maintenance (O&M) building, any proposed septic system(s), and parking area;
 - xiii. Meteorological towers;
 - xiv. Outline of concrete batch plant;
 - xv. Laydown, staging, and equipment storage areas;
 - xvi. Back-up generators and fuel storage areas;
 - xvii. Outline of the switchyard area; and
 - xviii. Location of related transmission facilities.
- (b) A construction operations plan indicating all materials lay-down areas, construction preparation areas, major excavation and soil storage areas, and construction equipment and worker parking areas.
 - (c) Grading and erosion control plans for construction and installation indicating soil types, depth to bedrock, general areas of cut and fill, retaining walls, initial and proposed contours, and permanent stormwater retention areas (will address both construction-phase and permanent installations).
 - (d) A landscaping plan indicating areas of trees to be retained, removed, or restored; berms, walls, fences and other landscaping improvements, and areas for snow removal storage.
 - (e) A lighting plan detailing the type, number and location of Federal Aviation Administration (“FAA”) required aviation navigation lighting, along with any Project safety lighting. The numbers and intensity of all lighting will be kept to the minimum level necessary for worker safety and measures such as motion activated control 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 and Project property.
 - (f) Architectural drawings including building and structure arrangements and exterior elevations for all buildings and structures, indicating the length, width, height, material of construction, color and finish of all buildings, structures, and fixed equipment.
 - (g) Typical design detail drawings of all underground facilities (section details will be provided for all single and multiple-circuit layouts, including dimensions of proposed depth and level cover, separation requirements between circuits, clearing width limits for construction and operation of the Facility, limits of disturbance, and required permanent ROW), and all overhead facilities (elevation details will be provided indicating height above grade, circuit layouts, permanent ROW widths, and structure separation requirements (for installations requiring more than one pole, etc.) for all single and multiple-circuit layouts; also, average span lengths will be indicated for each proposed overhead layout) including descriptions and specifications of all major

components including piping, conductors, wind turbine towers and blades, and other structures.

- (h) For onsite non-Article VII interconnection facilities, the plans and drawings required by subsections (a) through (g) of this stipulation for the proposed interconnection facilities and a profile of the centerline of the interconnection facilities at exaggerated vertical scale.
- (i) A list of engineering codes, standards, guidelines and practices that the Applicant intends to conform with when planning, designing, constructing, operating and maintaining the Project.

Stipulation 12 – 1001.12 Exhibit 12: Construction

Exhibit 12 shall contain:

- (a) A preliminary Quality Assurance and Control Plan, detailing staffing positions and qualifications necessary and demonstrating how the Applicant will monitor and assure conformance of facility installation with all applicable design, engineering and installation standards and criteria.
- (b) A statement from a responsible company official that:
 - (1) The Applicant and its contractors will conform to the requirements for protection of underground facilities contained in Public Service Law §119-b, as implemented by 16 NYCRR Part 753.
 - (2) The Applicant will comply with pole numbering and marking requirements, as implemented by 16 NYCRR Part 217.
- (c) Preliminary plans and descriptions indicating design, location and construction controls to avoid interference with existing utility transmission and distribution systems, indicating locations and typical separations of proposed facilities from existing electric, gas infrastructure (production or storage wells, pipelines, and related components), and communications infrastructure and measures to minimize interferences where avoidances cannot be reasonably achieved.
- (d) The Applicant will prepare a formal complaint resolution plan which includes specification of commitments for addressing public complaints, and procedures for dispute resolution during Project construction and operation. The Complaint Resolution Plan will include steps on how complaints will be received and how the public will be informed about the complaint process and the timeframe within which complaints will be resolved. In addition, the Plan will include a procedure for transmittal of a complaint log to DPS Staff. A complaint log listing all complaints and resolutions will be maintained during construction and operations of the Project and will be made available to DPS upon request. The plan will also describe actions the Applicant will take if the complaint remains unresolved after all these steps are followed.

Stipulation 13 – 1001.13 Exhibit 13: Real Property

Exhibit 13 shall contain:

- (a) An up-to-date map of the Project site showing property boundaries with tax map sheet, block and lot numbers; the owner of record of all parcels included in the site and for all adjacent properties; land rights, easements, grants and related encumbrances on the site parcels; public and private roads on or adjoining or planned for use as access to the site; zoning and related designations applicable to the site and adjoining properties. The locations of all Project facilities will be indicated on the map. Survey maps will be provided for the few parcels that have been purchased by the Applicant.
- (b) A property/right-of-way map of all proposed interconnection facilities and off-property/right-of-way access drives and construction lay-down or preparation areas for such interconnections.
- (c) A demonstration that the applicant has obtained title to or a leasehold interest in the facility site, including ingress and egress access to a public street, or is under binding Project or option to obtain such title or leasehold interest, or can obtain such title or leasehold interest.
- (d) A statement that the applicant has obtained, or can obtain, such deeds, easements, leases, licenses, or other real property rights or privileges as are necessary for all interconnections for the Project and electric transmission facilities.
- (e) An identification of any improvement district extensions necessary for the Project and a demonstration that the applicant has obtained, or can obtain, such improvement district extensions.

Stipulation 14 – 1001.14 Exhibit 14: Cost of Facilities

Exhibit 14 shall contain:

- (a) A detailed estimate, as explained in (b) below, of the total capital costs of the proposed Project, including 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. However, this information is proprietary. Therefore, the Applicant will seek the requisite trade secret protection for this information pursuant to POL Section 87(2) (d) and 16 NYCRR § 6-1.3.

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

- (b) The aforementioned cost estimate will be based on NextEra's experience in building wind energy projects in the United States and/or estimated prices from third-party vendors associated with the various wind energy project components, all in 2016 dollars. Estimated unit costs (\$/foot) for electric collection system circuits will be provided for both overhead and underground installations, as well as for both single and bundled circuits.
- (c) Upon the demand of any party or of the DPS, the Applicant shall supply the work papers from which the estimates required by subdivision (a) of this stipulation were made, provided that demand is made in the form of a written request. However, this information is proprietary and typically retained as trade secret. Therefore, the Applicant will seek the requisite trade secret protection for this information pursuant to POL Section 87(2) (d) and 16 NYCRR § 6-1.3.

Stipulation 15 – 1001.15 Exhibit 15: Public Health and Safety

Exhibit 15 shall contain:

A statement and evaluation that identifies, describes, and discusses all potential significant adverse impacts of the construction and operation of the Project, the onsite non-Article VII interconnections, and related facilities on the environment, public health, and safety, at a level of detail that reflects the severity of the impacts and the reasonable likelihood of their occurrence, identifies the current applicable statutory and regulatory framework, and also addresses:

- (a) The anticipated gaseous, liquid and solid wastes to be produced at the Project during construction and under representative operating conditions of the Project, including their source, anticipated volumes, composition and temperature, and such meteorological, hydrological and other information needed to support such estimates and any studies, identifying the author and date thereof, used in the analysis. During the construction phase, the only waste generated by the Project will be small amounts of solid waste, and that waste production is expected to be minimal. Examples of waste generated from construction materials include plastic, wood, cardboard, and metal packing materials, construction scrap, small amounts of waste concrete from concrete truck washout, and general refuse. The handling of wood waste from site clearing activities will also be addressed. In addition, small amounts of waste will be generated during routine maintenance activities (e.g., cardboard, cleaning rags and general refuse). Exhibit 15 will address how the waste materials will be properly recycled or disposed of at a nearby landfill facility. Exhibit 15 will also address the specific local solid waste collection services, landfills, or transfer stations within the Project Area. If wastewater disposal is necessary at the O&M Building, Exhibit 39 will contain a description of any new on-site septic system.
- (b) Beyond that which will be addressed in Stipulation 15(a) above, the Project will not result in additional volumes of waste to be released to the environment during construction and under any operating condition of the Project.
- (c) Beyond that which will be addressed in Stipulation 15(a) above, the Project will not need to treat additional waste to be released to the environment.
- (d) Beyond that which will be addressed in Stipulation 15(a) above, the Project will not need to identify procedures for the collection, handling, storage, transport and disposal of waste.
- (e) Impacts due to blade throw, tower collapse, audible frequency noise, low-frequency noise, infrasound, ice throw, shadow flicker, and delivery of oversize facility components to the site. The Application will include a comprehensive literature review limited to publications of: the World Health Organization; publications prepared by and for government institutions of countries that are part of the World Health Organization; professional, scientific and peer reviewed publications, addressing adverse impacts and potential short-term and long-term health effects generated from shadow flicker and noise, including audible noise, low frequency noise and infrasound. This will include a

discussion of the results of potential sound impacts on sound sensitive receptors identified in Stipulation 19 and potential flicker impacts on flicker sensitive receptors identified in Stipulation 24, at a level of detail that reflects the magnitude, severity and reasonable likelihood of occurrence of impacts.

The Application will include at a minimum a review of the following references:

- i) Guidelines for Community Noise WHO (1999);
- ii) Night Noise Guidelines for Europe, WHO 2009;
- iii) OSHA Standards for Hearing loss for Facility workers during work shifts.

Evaluation of annoyance will include at a minimum a review of the following references:

- i) “Best Practices Guidelines for Assessing Sound Emissions from Proposed Wind Farms and Measuring the Performance of Completed Projects,” October 13, 2011. Prepared for: The Minnesota Public Utilities Commission Under the auspices of the National Association of Regulatory Utility Commissioners (NARUC), Washington, DC.;
 - ii) Review of the evidence on the response to amplitude modulation from wind turbines. Phase 2 Report. Department for Business, Energy and Industrial Strategy. U.K. Commissioned by the Department of Energy & Climate Change (DECC). United Kingdom. August 2016; (For annoyance from amplitude modulation)
 - iii) Annex D of ANSI standard S12.9 -2005/Part 4 - Sounds with strong low-frequency content- (for minimization of annoyance from low frequency sounds);
 - iv) ANSI/ASA S2.71-1983 (R August 6, 2012) Guide to Evaluation of Human Exposure to Vibration in Buildings; (for annoyance from ground borne transmitted vibrations).
- (f) A site-specific shadow flicker analysis will be provided, as well as peer-reviewed published literature and reports from authoritative bodies on the subject and measures to be implemented to avoid, minimize and/or mitigate any impacts from shadow flicker, such as appropriate setbacks from residences. The methodology for the shadow flicker analysis is provided as Attachment B.
- (g) Maps of the Study Area and analysis showing relation of the proposed Project site to public water supply resources; community emergency response resources and facilities including police, fire and emergency medical response facilities and plans; emergency communications facilities; hospitals and emergency medical facilities; designated evacuation routes; existing known hazard risks including flood hazard zones, storm surge zones, areas of coastal erosion hazard, landslide hazard areas, areas of geologic, geomorphic or hydrologic hazard; dams, bridges and related infrastructure; explosive or flammable materials transportation or storage facilities; contaminated sites; and other local risk factors.

- (h) All significant impacts on the environment, public health, and safety associated with the information required to be identified pursuant to subdivisions (a) through (f) of this stipulation, including all reasonably related short-term, long-term, and cumulative impacts. The Project will be designed using appropriate setbacks in compliance with all municipal regulations. A thorough discussion of potential human health-related impacts associated with visual impacts, such as shadow flicker, associated with the operation of this Facility will be included. Shadow flicker studies and noise studies will utilize the same identifier codes for Project receptors in order to assist with evaluation of impacts. As used in this subdivision, cumulative impacts are any significant impacts on the environment that result from the incremental or increased impact of the Project when the impacts of the Project are added to the impacts of (1) the approximately 16-mile overhead 115 kV transmission line and related facilities to be constructed to connect the Project to the New York transmission grid that will be evaluated and certificated through a parallel and separate Article VII process, (2) general elements of the Canisteo Wind Energy Center within the Study Area, or (3) other existing or proposed wind turbines and related facilities within the Study Area (“Study Area” being within a 5-mile radius from all Project components; “proposed wind turbines” being wind turbines that are part of a project for which an application under Article 10 of the PSL has been submitted to the Siting Board as of the date of submission of the Application for the Project).
- (i) Any adverse impact on the environment, public health, and safety that cannot be avoided should the proposed Project be constructed and operated and measures for monitoring and measuring such impacts. Any measures that have been or would be undertaken to ensure excavation will not encounter potentially hazardous conditions will be included. A quality control protocol will be provided to address any such hazardous conditions should they be encountered.
- (j) Any irreversible and irretrievable commitment of resources that would be involved in the construction and operation of the Project.
- (k) Any measures proposed by the Applicant to minimize such impacts.
- (l) Any measures proposed by the Applicant to mitigate or offset such impacts.
- (m) Any monitoring of such impacts proposed by the Applicant.
- (n) Receptor locations (i.e., residences, cabins and any other potential sensitive receptors) for noise impact and shadow flicker impact; the analyses for both will use consistent identification numbers for the receptors locations.

Stipulation 16 – 1001.16 Exhibit 16: Pollution Control Facilities

This requirement is not applicable to the Project, as the Project will not generate pollutants, nor require any pollution control facilities.

Stipulation 17 – 1001.17 Exhibit 17: Air Emissions

Exhibit 17 shall contain a discussion of the anticipated impacts to air quality expected to result from the Project's construction and operation, including from temporary emission sources such as on-site concrete batch plant and fuel-fired generators, and identification of appropriate control and mitigation measures to minimize adverse impacts.

Stipulation 18 – 1001.18 Exhibit 18: Safety and Security

Exhibit 18 shall contain:

- (a) A preliminary plan for site security of the proposed Project during construction of such facility, including site plans and descriptions of the following site security features (if circumstances dictate their use):
 - (1) Access controls including fences, gates, bollards and other structural limitations.
 - (2) Electronic security and surveillance facilities.
 - (3) Security lighting, including specifications for lighting and controls to address work-site safety requirements and to avoid off-site light trespass.
 - (4) Setback considerations for Project components which may present hazards to public safety.
 - (5) Employee observation programs identify injury risks in the field, leading to focused injury prevention countermeasures. An example of an employee observation program from a similar NextEra project will be included in the Application.
 - (6) Measures to ensure safety and security during construction may include (if circumstances dictate) fencing of the construction laydown yard, locking gates to the yard during off-work hours and posting signs notifying the public of active constructions sites.
 - (7) The site security plan will include information on how and when the Applicant will communicate with stakeholders about construction activities and applicable safety and security measures.
- (b) A preliminary plan for site security of the proposed Project during operation of such facility, including site plans and descriptions of the following site security features (if circumstances dictate their use):
 - (1) Access controls including fences, gates, bollards and other structural limitations.
 - (2) Electronic security and surveillance facilities. The Application will describe the capabilities of these systems and identify the decision point that will initiate installation.
 - (3) Security lighting, including specifications for lighting and controls to address work-site safety requirements and to avoid off-site light trespass.
 - (4) Lighting of facility components to ensure aircraft safety. The Applicant will include an evaluation of potential night-time lighting in Exhibit 24.

- (5) Setback considerations for Project components which may present hazards to public safety.
 - (6) A description of a cyber-security program for the protection of digital computer and communication systems and networks that support the facility demonstrating compliance with current standards issued by a standards setting body generally recognized in the information technology industry, including, but not limited to, the federal Department of Commerce's National Institute of Standards and Technology, the North American Electric Reliability Corporation, or the International Organization for Standardization, and providing for periodic validation of compliance with the applicable standard by an independent auditor.
- (c) Safety and security are of the highest priority to Eight Point Wind and NextEra. Safety and security risks are anticipated to be minimal during both construction and operation of the Project, as they have been on historical experience at over 110 NextEra wind energy projects across the United States. A draft Emergency Response Plan to ensure the safety and security of the local community will include:
- (1) An identification of contingencies that would constitute a safety or security emergency.
 - (2) A description of coordination with local emergency response teams for any necessary training regarding safety or security emergencies.
 - (3) A description of the methodology used to determine safety and security controls.
 - (4) Emergency response measures by contingency.
 - (5) Evacuation control measures by contingency.
 - (6) Community notification procedures by contingency.
- (d) The Applicant will provide comparative safety data from similar NextEra projects in the Application.
- (e) The substance of the "ZERO Today" philosophy, is as follows: Our vision for NextEra safety is to establish and promote a safety culture based on the principle that ZERO injuries is the only acceptable target. We will provide support for business unit activities that clearly identify expectations for all levels of NextEra employees, and establish agreed upon consequences for exceeding, meeting or failing to meet those expectations. We expect each employee to work safely in order to return home at the end of the day, injury free. A copy of the "ZERO Today" philosophy will be included in the Application.
- (f) A statement that the Applicant will provide a copy of the plans required in subdivisions (a), (b), and (c) of this stipulation to, and request review of such plans and comment by, the New York State Division of Homeland Security and Emergency Services.

- (g) A description of all on-site equipment and systems to be provided to prevent or handle fire emergencies and hazardous substance incidents.
- (h) A description of all contingency plans to be implemented in response to the occurrence of a fire emergency or a hazardous substance incident.
- (i) A statement that the Applicant will provide a copy of the plans required in subdivision (c) of this stipulation to, and requested review of such plans and comment by, local emergency first responders serving the area of the facility site and a review by the applicant of any responses received.

Stipulation 19 – 1001.19 Exhibit 19: Noise and Vibration

Exhibit 19 shall contain a study of the potential noise impacts of the construction and operation of the Project. The study will include the wind turbines, related facilities and ancillary equipment.

Exhibit 19 will include:

- (a) A map of the study area showing the location of sensitive sound receptors within one-mile of the Project boundaries, in relation to the proposed Project, related proposed facilities and proposed ancillary equipment (including any related substations). The sensitive sound receptors shown shall including residences (including participating, non-participating, full-time and seasonal), outdoor public facilities and areas, hospitals, schools and other noise-sensitive receptors, if identified.
- (b) An evaluation of ambient pre-construction baseline noise conditions, including A-weighted/dBA sound levels, prominent discrete (pure) tones, at representative potentially impacted noise receptors, using actual measurement data recorded in winter and summer and during day and night as a function of time and frequency using a suitable and suitably calibrated sound level meter (SLM) and octave band frequency spectrum analyzer, or similar equipment. The ambient pre-construction baseline sound level will be filtered to exclude seasonal and intermittent noise. Details of the winter program are contained in a document entitled “Sound Level Measurement Protocol – Winter Season”. The pre-construction ambient sound levels at the Facility site and potentially impacted receptors will be evaluated in accordance with the requirements of these stipulations and applicable portions of ANSI Standards S12.100-2014 and S12.9 Part 2-1992 R-2013. These methods and standards will be described in the Noise Impact Analysis (NIA) and summarized in Exhibit 19 of the Application. Graphical timelines for the A-weighted Leq and the L90 broadband noise levels for each pre-construction sound measurement location will be included in the Application. Figures for the un-weighted Leq average full-octave band noise levels results for each pre-construction measurement location will also be included. The Application will describe how the pre-construction ambient surveys were conducted including specifications for sound instrumentation and weather meters, calibration, settings, positions that were tested, noise descriptors collected, range of sound frequencies evaluated, weather conditions, testing conditions to be excluded, schedules and time frames, testing methodologies and procedures, provisions for evaluation of existing tones and sounds with strong low frequency noise content, if any. Measurement locations will include GPS coordinates of the sound microphones and AADT information of the nearest road, to the extent the data is available from the County and/or NYSDOT. The seasonal noise in the summer survey will be filtered by using the process specified in ANSI/ASA S12.100-2014. Each sound collection will be conducted for a minimum of 14 consecutive days. Temporal accuracy of the ambient data will be calculated to a 95% confidence interval using the technique in Section 9.2 of ANSI S12.9-1992/Part 2 (R2013) or any other applicable statistical procedure as appropriate for the Leq and the L90 noise descriptors. Infrasound data down to 0.5 Hz will be collected at two locations during the ambient measurement

programs (summer and winter).

- (c) An evaluation of future noise levels during construction of the proposed Facility, proposed related facilities and proposed ancillary equipment, including predicted A-weighted sound levels at various distances and at proximate potentially impacted and representative sensitive sound receptors will be performed using the FHWA Roadway Construction Noise Model (RCNM). Information will include predicted sound levels at the nearest sensitive receptor(s) around the most critical turbine locations, and the substation, including the loudest pieces of equipment for the different phases of construction and at any proposed batch plant/laydown area. By its very nature, construction equipment typically moves around the site. For construction sound level impacts, a “table of sound levels vs. distances” will be presented. The construction analysis will create this table, and include actual distances from expected construction activity to residences around the Project area. This will provide construction sound levels at residences that will be compared to measured existing sound levels.
- (d) Future sound levels from the Facility will be calculated with the Cadna/A computer software or similar software that uses the ISO 9613-2 standard and CONCAWE meteorological corrections. The Cadna/A model performs calculations for full octave bands from 31.5 Hertz (Hz) to 8000 Hz. Computer noise modelling will be performed at a minimum for the turbine model with the highest Broadband A-weighted sound power level (The turbine that has the loudest sound operational levels at the highest wind condition (Maximum dBA sound power level)). If other turbines have lower broadband A-weighted sound power levels but greater maximum un-weighted sound power levels at the 16 Hz, 31.5 Hz, or 63 Hz full-octave bands, the discussion of low frequency noise impacts at these bands can be based on an additional modelling scenario with the maximum sound power levels at these low frequency bands or by applying corrections to the low-frequency band results of the computer modelling for the turbine with the highest A-weighted broadband sound power level, as appropriate. The Application will include a discussion and justification for ground absorption “G” values that will be used for sound propagation over land.

ISO 9613-2 Noise Modeling:

For the purposes of evaluation of community complaint potential, noise modeling with the ISO 9613-2 will be conducted by following the recommendations included in the following reference: “Best Practices Guidelines for Assessing Sound Emissions from Proposed Wind Farms and Measuring the Performance of Completed Projects,” October 13, 2011. Prepared for: The Minnesota Public Utilities Commission Under the auspices of the National Association of Regulatory Utility Commissioners (NARUC), Washington, DC. (Designated as NARUC-2011 in this stipulation). The predicted sound levels from ISO 9613-2 will be reported for sensitive receptors in tabular format and shown at sensitive receptors and external property boundaries through graphical isolines of A-weighted decibels. Contours will be at 1-dBA increments. Noise contours representing sound levels in multiples of 5 dB will be differentiated. Participating and non-participating

properties will be differentiated. A temperature of 10 degrees Celsius and 70% relative humidity will be used to calculate atmospheric absorption in accordance with the ISO 9613-2 standard. These conditions result in the smallest reduction in sound levels caused by air absorption at the key frequencies for A-weighted sound levels. Additional modeling scenarios for evaluation of mitigation options for impact avoidance or minimization will be included, if needed. In this case, results will be differentiated. (e.g.: “mitigated” vs. “un-mitigated”). A ground absorption factor, G, of zero (G=0) will be used to represent water bodies.

CONCAWE Noise Modelling:

A full year of meteorological data will be used to calculate the CONCAWE meteorological corrections and sound levels for each hour of the year (8760 hours). The Application will include worst case (L10) and typical (L50) operational sound levels. In general, the sound levels as estimated with the CONCAWE meteorological corrections will be driven by the hourly wind speed which drives the resultant sound power level of the wind turbines and wind direction which affects sound propagation from the turbines.

An estimate of the noise level to be produced by the wind turbines, and substation, will be performed assuming:

- 1) Sound propagation using the Cadna/A software or similar computer model that incorporates the ISO 9613-2 standard and CONCAWE meteorological corrections.
- 2) Noise modeling and calculation of the Conservation of Clean Air and Water Europe (CONCAWE) meteorological adjustments will include at least 64 different meteorological conditions and will generate one year of turbine sound levels at each receptor by the use of a computer noise model with estimates of hourly turbine power and uses one year of met tower data. These will be used to provide worst case (L10) and typical (L50) sound levels as specified in Section (f) and at all identified sensitive sound receptors specified in Section (a) of this stipulation.
- 3) The different meteorological conditions (e.g.: 64 meteorological conditions) will be reported and discussed. This will also include meteorological information (e.g. as collected at the meteorological tower(s) and/or from a proximal representative weather station) for the 8,760 hours. This will be delivered to DPS in spreadsheet compatible or tabular format and will be treated as confidential, if requested.
- 4) The model will also include relevant noise sources from substations, proposed ancillary equipment and emergency generators, if any.

ISO 9613-2 and CONCAWE Noise Modeling:

- 5) The Application will include a brief discussion about the accuracy of selected outdoor propagation models, methodologies, ground absorption values, meteorological corrections, assumptions and the correlation between measurements and predictions for documented cases as compared to other alternatives, as available. This will also include a description and general discussion of the site topography between turbines and receptor locations as applicable to the site, and its effects on accuracy of modeling results. (E.g. flat, steady or concave slopes).
 - 6) ISO-9613 and CONCAWE modeling results will be discussed independently without applying any corrections to match both results. If any corrections are applied, they will be explained and justified and both results with and without corrections will be reported.
- (e) An evaluation of future noise levels predicted during operation of the facility, related facilities and ancillary equipment including:
- 1) Modeled A-weighted/dBA sound levels at all sensitive sound receptors.
 - 2) A tonal evaluation based on the reported sound power of each wind turbine model and substation transformers under consideration will be performed. This will be done as part of the pre-construction evaluation. The “prominent discrete tone” constant level differences (Kt) in ANSI S12.9-2013/Part 3 Annex B, section B.1, will be used to evaluate tones at the nearest ten (10) potentially impacted and representative noise receptors using spreadsheet calculations. One-third octave band data will be used for the turbine models where information from the manufacturers is available and included in a spreadsheet to determine if a tonal (prominent tone) condition is possible. Information from the IEC 61400-11 documentation on tonality will be provided for the wind turbine model(s) under consideration.
 - 3) Amplitude modulation:
 - The Application will include a literature review of amplitude modulation from wind turbine operations with a summary of findings including, but not limited to, whether amplitude modulation can be predicted, and post-construction operational mitigation options to avoid, minimize, and mitigate amplitude modulation effects on receptors. The review will also include an analysis of the effects of amplitude modulation in adverse community noise reaction including annoyance and complaints. At a minimum the following reference will be included in the literature review: Review of the evidence on the response to amplitude modulation from wind turbines. Phase 2 Report. Department for Business, Energy and Industrial Strategy. U.K. Commissioned by the Department of Energy & Climate Change (DECC). United Kingdom. August 2016.

- Reporting of wind shear and turbulence data will be based on one year of on-site met tower data.
 - Additional standards and guidance documents, (i.e., the IEC 61400-11) will be utilized as applicable and appropriate.
 - A summary of formulae, procedures and assumptions will be described.
 - A detailed discussion of the met tower data, and other applicable standards for evaluation, will be included in the Application as well as amplitude modulation sound effects on modeled data and forecasted impacts.
- 4) Infrasound and low-frequency sound will also be evaluated at potentially impacted and representative noise sensitive receptors as listed in section (a) of this Stipulation. The Application will include a list of available sound data, detailed discussion and appropriate literature references for proposed turbine models or from similar projects with similar wind turbine models. Should a model be selected that has available infrasound data, then this information will be used as the basis for infrasound evaluation. Cumulative effects from infrasound, if any, will also be discussed in the Application.
- (f) The A-weighted/dBA sound levels, in tabular form for each sensitive location, will be calculated both with and without periods when the turbines will not be operating (rotating) for the yearly average sound levels. Future sound levels as required by 1001.19 Exh.10 (f) will be done using the 8760 hours of modeled results and assigning them to the corresponding hours defining “winter nighttime”, etc. The tables will include the following:
- (1) The daytime ambient noise level will be calculated from summer and winter background sound level monitoring data. This will be equal to the lower tenth percentile (L90) of sound levels measured during the daytime at each of the monitoring locations. Daytime will be 15 hours (7 AM – 10 PM).
 - (2) The summer nighttime ambient noise level will be calculated from summer background sound level monitoring data. This will be equal to the lower tenth percentile (L90) of sound levels measured at night, during the summer at each of the monitoring locations. Nighttime will be 9 hours (10 PM – 7 AM).
 - (3) The winter nighttime ambient noise level will be calculated from background sound level monitoring data. This will be equal to the lower tenth percentile (L90) of sound levels measured at night, during the winter at each of the monitoring locations. Nighttime will be 9 hours (10 PM – 7 AM).
 - (4) The worst case future noise level during the daytime period will be determined by logarithmically adding the daytime ambient sound level (L90), calculated from background sound level monitoring, to the modeled upper tenth percentile sound level (L10) of the Facility. The L10 statistical noise

descriptor corresponds to estimates for one year of operation. Daytime will be 15 hours (7 AM – 10 PM).

- (5) The worst case future noise level during the summer nighttime period will be determined for each noise sensitive location listed in section (a) of this stipulation by logarithmically adding the most representative summer nighttime ambient sound level (L90) as related to the use and soundscape of the location being evaluated, calculated from background sound level monitoring, to the modeled upper tenth percentile sound level (L10) of the Facility at each evaluated receptor. The L10 statistical noise descriptor is proposed to be estimated for the summer nighttime period within one year of operation. Nighttime will be 9 hours (10 PM – 7 AM).
- (6) The worst case future noise level during the winter nighttime period will be determined for each noise sensitive location listed in section (a) of this stipulation by logarithmically adding the most representative winter nighttime ambient sound level (L90) as related to the use and soundscape of the location being evaluated, calculated from background sound level monitoring to the modeled upper tenth percentile sound level (L10) the Facility at each evaluated receptor. The L10 statistical noise descriptor is proposed to be estimated for the winter nighttime period within one year of operation. Nighttime will be 9 hours (10 PM – 7 AM).
- (7) The daytime ambient average noise level will be calculated by logarithmically averaging sound pressure levels (Leq) (after exclusions) from the background sound level measurements over the daytime period at each monitoring location. These calculations will include both summer and winter data. Daytime will be 15 hours (7 AM – 10 PM).
- (8) Typical facility noise levels for each noise sensitive location listed in section (a) of this stipulation will be calculated as the median sound pressure level emitted by the Facility at each evaluated receptor. The median sound pressure level will be calculated by determining the frequency of site specific meteorological conditions and sound emissions of the Facility due to those conditions. The L50 statistical noise descriptor will correspond to the median daytime sound level in a year.
- (9) Typical facility daytime noise levels for each noise sensitive location listed in section (a) of this stipulation will be calculated as the most representative daytime equivalent average sound level (Leq) that was measured, as related to the use and soundscape of the location being evaluated , logarithmically added to the median Facility sound pressure level (L50) at each evaluated receptor . The L50 statistical noise descriptor will correspond to the daytime in a year. Daytime will be 15 hours (7 AM – 10 PM).
- (g) A complete description of regulations, ordinances, noise standards, guidelines and goals applicable to the Facility site at sound receptors and boundary lines and a

discussion of the Facility's level of compliance with them. The predicted worst-case sound levels from the Facility at NYSDEC lands will be compared to the NYSDEC Noise Guideline document to assess noise impacts. The predicted sound levels from the Facility at residential receptors as modeled with the ISO 9613-2 will be compared to the WHO Guidelines for Community Noise (1999). Predicted sound levels by using CONCAWE will be compared to the WHO Night Noise Guidelines for Europe (2009). Sound levels as predicted with the ISO 9613-2 computer model as specified in section (d) will be compared to the following Guidelines: "Wind Energy & Wind Park Siting and Zoning Best Practices and Guidance for States," The National Association of Regulatory Utility Commissioners (NARUC) Grants & Research, January 2012. A report for the Minnesota Public Utilities Commission Funded by the U.S. Department of Energy and "Best Practices Guidelines for Assessing Sound Emissions from Proposed Wind Farms and Measuring the Performance of Completed Projects," October 13, 2011. Prepared for: The Minnesota Public Utilities Commission Under the auspices of the National Association of Regulatory Utility Commissioners (NARUC), Washington, DC.

- (h) A table outlining regulations, ordinances, noise standards, guidelines and goals applicable to the Facility. The Applicant will review applicable local codes and will provide a summary of applicable noise standards from these codes. In addition, the Applicant will include a summary of noise-modelling results from the Noise Impact Analysis for all noise sensitive receptors as listed in section (a) of these stipulations in relation to applicable noise ordinances, standards, guidelines, goals and identified criteria by using the specific requirements as related to noise descriptors (e.g. L_{eq} , L_{10} , $L_{eq_{night}}$, $L(\delta_{night})$ etc.), weighting scales, and time frame of determination (e.g.: minutes/hour, 1-hour, 1-year, etc.). Noise levels for participant and non-participant lot boundary lines will be represented as specified in section (d).
- (i) Identification and evaluation of reasonable noise abatement measures for construction activities will be provided, including a description of the noise complaint resolution plan that shall be provided during the construction period. The Application will include an assessment of reasonable noise abatement measures during construction (i.e., implementing BMPs, complaint resolution plan, etc.).
- (j) An identification and evaluation of reasonable noise abatement measures for the final design and operation of the Facility including the use of alternative technologies, alternative designs, and alternative Facility arrangements.
- (k) An evaluation of the following potential community noise impacts:
 - (1) The potential for the Facility to result in hearing damage will be addressed using OSHA standards, EPA Guideline Level and WHO-1999.
 - (2) Indoor and outdoor speech interference will be addressed using the EPA and WHO-1999 Guideline Levels.
 - (3) Potential for annoyance and complaints will include a review of peer

reviewed studies, government, scientific and professional publications, specific to the relationship between wind turbine noise and annoyance/complaints. The literature review will include, among others, the following reference: NARUC-2011. Community complaint potential will be evaluated based upon identified factors, thresholds and guidelines. Number of sensitive receptors grouped by use and by participation status exposed to noise levels equal to and greater than 40 dBA will be reported in 1 dBA intervals with sound levels rounded to the nearest integer.

- (4) A summary of thresholds and guidelines included in the NYSDEC Program Policy Assessing and Mitigating Noise Impacts, as well a description of compliance with these guidelines for NYSDEC lands, will be provided in the noise report to be included with the Article 10 Application.
- (5) Information regarding construction activities will be included in the Construction Operations Plan, the Preliminary Blasting Plan (if any blasting is determined to be necessary), and the Preliminary Geotechnical Report, which will be summarized in Exhibits 12, 19 and 21 of the Application. Potential for some construction activities (such as blasting, pile driving, excavation, horizontal directional drilling (HDD) or rock hammering, if any) to produce any cracks, settlements or structural damage on any existing proximal buildings, including any residences, historical buildings or infrastructure will be analyzed in the Application.
- (6) Potential for ground-borne transmitted vibrations from the operation of the Facility to reach a noise sensitive receptor and cause vibrations on the floors or on building envelope elements that may be perceived at the receptor. The discussion can be illustrated with publicly available or measured data from similar projects and an analysis of whether ground borne transmitted vibrations from the operation of the turbines could exceed vibration thresholds as recommended by ANSI S2.71-1983 (R 2012) and ISO 2631-2-2003 for residential use. Description of the validity and applicability of data from other Wind Facilities will include technical considerations such as similarities between oscillating masses, frequency of rotation, vibration isolation, foundation, soil type and distances.
- (7) The potential for air-borne induced vibrations from the operation of the facility to generate annoyance, cause vibrations, rumbles or rattles in windows, walls or floors of sensitive receptors will be analyzed by applying the Hubbard Methodology or the outdoor criteria established in annex D of ANSI standard S12.9 - 2005/Part 4. Applicable portions of ANSI 12.2 (2008) may be used for the evaluation of frequency bands where ANSI 12.2 (2008) may be a more restricting criterion, or if it is

expected that ANSI S12.9- 2005/Part 4- Annex D guidelines would be met but still represent a potential for perceptible vibrations at indoor locations of sensitive sound receptors, if any. Maximum sound levels at the 31.5 and 63 Hz bands as predicted with computer noise modeling (ISO and CONCAWE) will be reported for all sound sensitive receptors specified in section (a) of this stipulation. Discussion of the 16 Hz full-octave band will be based on extrapolated data down to the 16 Hz.

- (8) A map and a discussion about the potential of low-frequency noise including infrasound and vibration from operation of the facility to interfere with seismological stations within 50 miles, as well as with stations that are part of the Comprehensive Nuclear Test Ban Treaty Organization (CTBTO) International Monitoring System.
- (l) A description of the proposed post-construction noise evaluation studies and a plan for post-construction noise evaluation to determine compliance with operational noise design goals.
- (m) An identification of practicable post-construction operational controls and other mitigation measures that will be available to address reasonable complaints, including a description of a complaint resolution plan that shall be provided during periods of construction and operation.
- (n) Specific modeling input parameters, assumptions, and any associated data used in sound propagation modeling and calculations will be included as an appendix to the NIA and shall fairly match the unique operational noise characteristics of the particular models and configurations proposed for the facility. GIS files with turbine locations and ground elevations, other noise sources and heights; evaluated participating and non-participating receptor locations; participant and non-participant boundary lines, grading, and topography will be delivered directly to DPS-Staff by electronic means.
- (o) A glossary of terminology, definitions, and abbreviations used throughout Exhibit 19 and citations with references mentioned in the Application.
- (p) To the extent possible, the findings and results of Exhibit 19 will be reported and presented in the Application in the same order as listed in this stipulation. Some contents can be presented as Appendices (e.g., Pre-construction Ambient Sound Level survey data).

Stipulation 20 – 1001.20 Exhibit 20: Cultural Resources

Consistent with 16 NYCRR § 1001.20 and the New York State Historic Preservation Office (“SHPO”) Guidelines for Wind Farm Development Cultural Resources Survey Work (the SHPO Guidelines; OPRHP 2006), the Applicant initiated consultation with the New York State Office of Parks, Recreation and Historic Preservation (“OPRHP”) by letter dated February 4, 2016 to develop the scope and methodology for cultural resources studies for the Project. To date, formal consultation with OPRHP has included initiating Project review and consultation through OPRHP’s Cultural Resources Information System (“CRIS”) website and submission of three technical documents: Request for Consultation Letter; Research Design for Phase IA/IB Cultural Resources Survey of Proposed Eight Point Wind Energy Project Steuben County, New York; and Project Shapefiles showing the preliminary Project layout.

Exhibit 20 shall contain:

- (a) A study of the impacts of the construction and operation of the Project, interconnections and related facilities on archeological resources, including:
 - (1) A summary of the nature of the probable impact on any archaeological/cultural resources identified addressing how those impacts shall be avoided or minimized.
 - (2) A Phase IA archeological/cultural resources study for the Area of Potential Effect (APE) for the Project site and any areas to be used for interconnections or related facilities.
 - (3) A Phase IB study.
 - (4) Phase II archaeological studies, in consultation with OPRHP and DPS, if warranted based on Phase I study results.
 - (5) A complete list of all recovered artifacts.
 - (6) An Unanticipated Discovery Plan that shall identify the actions to be taken in the unexpected event that resources of cultural, historical or archeological importance are encountered during the excavation. The Plan shall include a provision for work stoppage upon the discovery of possible archaeological or human remains. In addition, the Plan shall specify the degree to which the methodology used to assess any discoveries follows the most recent Standards for Cultural Resource Investigation and Curation of Archeological Collections in New York State. Such an assessment, if warranted shall be conducted by a professional archeologist, qualified according to the standards of the New York State Archaeological Council.
 - (7) The Applicant will provide shapefiles of archaeological and historic resource survey locations, attribute data, and results.
- (b) A study of the impacts of the construction and operation of the Project and the interconnections and related facilities on historic resources, including the results of

field inspections and consultation with local historic preservation groups to identify sites or structures listed or eligible for listing on the State or National Register of Historic Places within the viewshed of the facility and within the Study Area, including an analysis of potential impact on any standing structures which appear to be at least 50 years old and potentially eligible for listing in the State or National Register of Historic Places, based on an assessment by a person qualified pursuant to federal regulation (36 C.F.R. 61). Mitigation measures, such as local improvement projects, will be discussed should there be any unavoidable impacts to cultural resources. Audible or visual impacts, if any, should be addressed

- (c) Analysis of potential cumulative impacts on archeological and historic resources within the Study Area. As used in this Stipulation 20, cumulative impacts are any significant impacts on archeological and historic resources that result from the incremental or increased impacts of the Project when the impacts of the Project are added to the impacts of (1) the approximately 16-mile overhead 115 kV transmission line and related facilities to be constructed to connect the Project to the New York transmission grid that will be evaluated and certificated through a parallel and separate Article VII process, (2) general elements of the Canisteo Wind Energy Center within the Study Area, or (3) other existing wind turbines and related facilities within the Study Area (“Study Area” being within a 5-mile radius from all Project components; “proposed wind turbines” being wind turbines that are part of a project for which an application under Article 10 of the PSL has been submitted to the Siting Board as of the date of submission of the Application for the Project).

Stipulation 21 – 1001.21 Exhibit 21: Geology, Seismology and Soils

Exhibit 21 shall contain a study of the geology, seismology, and soils impacts of the facility consisting of the identification and mapping of existing conditions, an impact analysis, and proposed impact avoidance and mitigation measures, including:

- (a) A map delineating existing slopes (0-3%, 3-8%, 8-15%, 15-25%, 25-35%, 35% and over) on and within the drainage area potentially influenced by the Project site and onsite non-Article VII interconnections using the USGS National Elevation Dataset and ESRI ArcGIS® software.
- (b) A proposed site plan showing existing and proposed contours at two-foot intervals, for the Project site and onsite non-Article VII interconnections, at a scale sufficient to show all proposed buildings, structures, paved and vegetative areas, and construction areas.
- (c) Preliminary cut and fill calculations based on publicly available contour data. Separate calculations for topsoil, sub-soil and rock will be roughly approximated based on publicly available data from the County Soil Survey. A description of typical scenarios that would result in cut and fill necessary to construct the Facility, such as turbine foundation excavation. A description and preliminary calculation of the quantity of cut and fill necessary to construct the Project, including separate calculations for topsoil and sub-soil, and including a plan to identify the presence of invasive species in spoil material. No fill material is planned to be transported from the Project Area to outside areas, thus adverse impacts associated with the spread of invasive species as a result of the Project are not anticipated.
- (d) A description and preliminary calculation of the amount of fill, gravel, asphalt, and surface treatment material to be brought in to the Project site and onsite non-Article VII interconnections. The Application will describe the anticipated amount and characteristics of all fill materials expected to be imported into the site. For comparative context, the anticipated amount of fill materials imported will be presented in both cubic yards, and the equivalent number of truck loads.
- (e) No materials will be removed from the Project Area. The Application will confirm that existing soils are suitable for reuse as backfill with reference to the results of the Preliminary Geotechnical Investigations and existing soils mapping and data, and will indicate why it is not necessary to remove material from the site as it will be a direct result of cut and fill estimates and used in site restoration.
- (f) A description of construction methodologies and activities associated with the Facility, including anticipated excavation techniques, based on site-specific preliminary geotechnical investigations, and a preliminary identification of where each type of excavation will be employed.
 - (1) Location and approximate extent (lengths) of installations where Horizontal Directional Drilling (HDD) or other trenchless methods of installing underground electrical collection lines may be proposed (if any).

- (2) Staging or setup area for the HDD or trenchless installation. Typical setbacks from streams, wetlands, drinking water wells, topsoil protection measures (on agricultural lands) and sediment and erosion control measures.
 - (3) To the extent known, soil and bedrock conditions at anticipated boring locations, including depth to bedrock, will be described.
 - (4) If HDD or other trenchless methods are anticipated, an inadvertent return plan will be included in the Application.
 - (5) Installation methods will be used to identify installation of facilities across streams and wetlands.
 - (6) Sensitive environmental resources will be identified. A delineation of temporary cut or fill storage areas to be employed.
- (g) A description of the characteristics and suitability for construction purposes of the material excavated for the Project and of the deposits found at foundation level, including factors such as soil corrosivity of steel and concrete, risk of frost action and frost heave, and subsurface hydrologic characteristics.
- (h) A statement whether blasting operations are likely to be required for the Project based on the results and data obtained from a preliminary geotechnical investigation. If blasting is determined to be required, a preliminary blasting plan, an assessment of potential blasting impacts, and a blasting impact mitigation measures plan will be provided.
- (i) A description of the regional geology, tectonic setting and seismology of the Project vicinity.
- (j) An analysis of the expected impacts of construction and operation of the Project with respect to regional geology.
- (k) An analysis of the impacts of typical seismic activity experienced in the Project Area based on current seismic hazards maps, on the location and operation of the Project identifying potential receptors in the event of failure, and if the facility is proposed to be located near a young fault or a fault that has had displacement in Holocene time, demonstration of a suitable setback from such fault.
- (l) A map delineating soil types at the Facility and interconnections site using data from the USDA-Web Soil Survey. Maps will depict vulnerable agricultural soils including, but not limited to, those identified in the County Soil Survey as fragipans, lacustrines, dense basal tills, soils with seasonably high water table or soils with less than 5-feet of depth to bedrock. Maps will identified soils using the following codes:
- (1) “VE” (designated general area of vulnerability of erosion due to factors of slope and/or texture of exposed soil)

- (2) “VW” (designated general area of vulnerability to soil horizon wetness as described above.
- (3) “VB” (designated general area of vulnerability due the shallow depth to bedrock.
- (4) “V/OR” (Mucklands)

A plan for protecting agricultural topsoil from mixing with subsoil and other spoil material such as waste rock, for the preservation of such soils, and avoidance of compacting agricultural spoils, along with other Agricultural and Markets requirements, including a full-time agricultural monitor, shall be included.

- (m) A description of the characteristics and suitability for construction purposes of each soil type identified above, including a description of the soil structure, texture, percentage of organic matter, and recharge/infiltration capacity of each soil type and a discussion of any de-watering that may be necessary during construction and whether the Project shall contain any facilities below grade that would require continuous de-watering.
- (n) Maps, figures, and analyses delineating depth to bedrock and underlying bedrock types, including vertical profiles showing soils, bedrock, water table, seasonal high groundwater, and typical foundation depths on the Project site, and any area to be disturbed for roadways to be constructed and all off-site interconnections required to serve the facility, including an evaluation for potential impacts due to facility construction and operation, including any on-site wastewater disposal system, based on information to be obtained from available published maps and scientific literature, review of technical studies conducted on and in the vicinity of the facility, and on-site field observations, test pits and/or borings as available; the Applicant will also provide a copy of a geotechnical report that has been prepared for the Project site.
- (o) An evaluation to determine suitable building and equipment foundations, including:
 - (1) A preliminary engineering assessment to determine the types and locations of foundations to be employed. The assessment shall investigate the suitability of such foundation types as spread footings, caissons, or piles, including a statement that all such techniques conform to applicable building codes or industry standards.
 - (2) A statement whether pile driving is proposed to take place in the construction of the Project and, if pile driving is required, that a pile driving impact mitigation plan will be provided.
- (p) An evaluation of the vulnerability of the Project site and the operation of the Project to an earthquake event. Because of the Project’s distance from any large body of water, the Application will not address tsunami vulnerability.
- (q) A copy of the Preliminary Geotechnical Investigation Report will be included as an appendix. Exhibit 21 will include a summary of the report’s findings and recommendations, identify methods that will be utilized to address geotechnical

constraints, and describe additional geotechnical investigations that will be performed prior to construction.

Stipulation 22 – 1001.22 Exhibit 22: Terrestrial Ecology and Wetlands

Exhibit 22 shall contain:

- (a) An identification and description of the type of plant communities present on the facility site and adjacent properties, including plant community mapping using Geographic Information System (GIS) software, based upon field observations and data collection consistent with the nature of the site and access availability to adjacent properties, roadside surveys of adjacent parcels, and a review of aerial imagery and National Land Cover Data (NLCD) information. A plant species list, which will include all species identified during these various surveys and date range(s) of surveys, will be provided. Specific information on and a detailed description of all ecological communities identified within parcels that will host Facility Site components will be provided, as classified according to *Ecological Communities of New York State* (Edinger et al., 2014).
- (b) An analysis of the proposed temporary and permanent impacts (including forest fragmentation) of the construction and operation of the Project and the onsite non-Article VII interconnections to plant communities will be calculated using GIS software and discussed based on specific assumptions associated with the proposed limits of vegetation clearing and soil disturbance for each type of Facility component, or the limits of disturbance, as identified in the Preliminary Design Drawings (Exhibit 11). The limits of disturbance will include all areas of anticipated vegetation clearing and soil disturbance. In addition to identification on Preliminary Design Drawings, the dimensions of these areas will be listed by component type in tabular format. A map will depict vegetation cover types in relation to proposed limits of vegetation disturbance, and GIS shapefiles showing all areas of clearing and disturbance will be provided to NYSDEC. A summary impact table will quantify the number of acres that will be temporarily and permanently impacted by the various Facility components (permanent impact calculations will include all tree clearing for construction and operation of the facility). A generated list of all pre-existing non-native invasive plant species and non-native insect species observed and documented during field investigation (within the anticipated limits of disturbance only) and maps of concentrations of invasive species within the survey corridor and on adjacent properties (based on aerial photo interpretation /remote sensing) will be provided in the Application. In addition, an Invasive Species Prevention and Control Plan that addresses the species listed in 6 New York Code Rules and Regulations (NYCRR) Part 575 will be included in the Application. Specifically, the Invasive Species Prevention and Control Plan will include the following:
 1. A summary of the survey methods the Applicant used to identify and mark existing non-native invasive plant and identify insect species within the Facility site;
 2. Specific methods the Applicant will use to ensure that imported fill and fill leaving the facility site will be free of non-native invasive plant and insect species

- (to the extent practicable). Materials leaving the site will be free of invasive species to the extent practicable;
3. Specification on how fill materials to be placed within the Facility will be free of non-native invasive plant and insect species, or, if not free of these items, it will only be used within the areas already containing those non-native plant and insect species infestation;
 4. Proposed Facility site grading and erosion and sediment control methods that will be used to prevent the introduction, spread, or proliferation of non-native invasive plant and insect species to the extent practicable;
 5. A detailed description of cleaning procedures for removing non-native invasive plant and insect species from equipment and personnel, and properly disposing of materials known to be or suspected of being infested;
 6. Details of procedures for preventing the spread of invasive insects and diseases, such as the emerald ash borer and oak wilt, and a discussion of how the Applicant will comply with the state quarantine and protective zones on the transport of ash trees, where applicable, from the Facility Site;
 7. Implementation plans for ensuring that equipment and personnel arrive at and depart from the Facility site clean and free of non-native invasive plant and insect species;
 8. Description of the Best Management Practices (BMP) or procedures that will be implemented, and the education measures that will be used to educate workers;
 9. Detailed description of a post-construction monitoring plan (for no less than five years) and survey measures and procedures for revising the Invasive Species Control Plan in the event that the goals of the initial plan are not met within a specified timeframe; and
 10. Anticipated methods and procedures used to treat non-native invasive plant and insect species that have been introduced or spread as a result of the construction or operation of the Facility.
- (c) A detailed description of the proposed measures that will be implemented to avoid, minimize, and potentially mitigate for any temporary and permanent impacts to existing, non-invasive plant communities, particularly grasslands, wetlands, and interior forests, as a result of the construction and operation of the facility. An alternatives analysis will be presented in Exhibit 9, which will include a discussion of vegetative clearing under the alternatives analyzed.
- (d) Information on and a characterization of aquatic habitats, vegetation, wildlife and wildlife habitats. This shall include:

1. Identification and description of plant communities, species and wildlife habitat. Such descriptions will include field identification and verification of aquatic habitats, plant communities, and wildlife habitat that could potentially support federally or state-listed threatened and endangered (T&E) species, state species of special concern (SCC), and state species of greatest conservation need (SGCN) as documented during on-site field investigations (e.g., ecological cover type assessments, habitat assessments, and wetland delineations). US Fish and Wildlife Service (USFWS) and New York Natural Heritage Program (NHP) database information will be used to determine if any hibernacula are located within the study area. If hibernacula are identified within the Project area, or five miles from any Project component or boundary, the location and distance to the nearest identified hibernacula will be provided separately and confidentially to NYSDEC;
2. A discussion of the extent, methodology and results of all avian and bat surveys conducted by the Applicant or its agents within or in the vicinity of the Facility Site will be provided in Exhibit 22(h). Draft reports will be provided to USFWS, NYSDEC, and DPS Staff as soon as possible after they are prepared, but no less than at least 30 days prior to the final reports, along with final work plans, comments, and supplemental information requested by USFWS and NYSDEC;
3. Shapefiles suitable for use in GIS software via ESRI's ArcGIS suite of software (e.g. ArcMap) (submitted to NYSDEC and DPS Staff at least 30 days before the Applicant submits an Article 10 Application), depicting the location of all Facility components including (separately): extent of current Facility site; turbine locations; new and existing access and maintenance roads; electric collection and transmission lines (specified above ground and/or underground); laydown and storage area(s); substation(s); temporary and permanent meteorological tower(s); any other temporary or permanent infrastructure constructed in support of the Facility; all areas to be cleared around turbines, access roads, electric lines, and all other Facility components;
4. Shapefiles suitable for use in GIS software via ESRI's ArcGIS suite of software (e.g. ArcMap) (submitted to NYSDEC no less than at least 30 days before the Applicant submits an Article 10 Application), depicting all wildlife survey locations, including (separately): breeding bird survey transects; eagle/raptor survey locations; bat acoustic monitoring locations; winter raptor survey locations, and driving routes; radar unit location; and aerial nest survey area. View sheds for eagle and winter raptor observation points, indicating the area visible from each point, will also be provided;
5. Information on amphibians and reptiles, based on the New York State Amphibians & Reptile Atlas Project (Herp Atlas), and assessments of suitable habitat in the vicinity of the Facility area. Information on reptile and amphibian distribution ranges based on database records obtained from NHP, NYSDEC, and USFWS, assessments of suitable habitat in the Facility Area, and any field observations made on-site or in the vicinity of the Facility. To the extent that vernal pools and their functions (including the surrounding upland habitat) may

be impacted by construction or operation of the Facility, those features will be identified under appropriate seasonal conditions and these impacts shall be identified and assessed in the Application. Such impacts may require, in consultation with DEC and DPS staff, the development and implementation of site-specific surveys for reptile and amphibian species under appropriate seasonal conditions in order to quantify the level of impact from the project. Depending on the intended timing of submission, this work may require that study of this topic continue after the Application is submitted;

6. An inventory of typical birds, amphibians, terrestrial invertebrates and reptiles found in the region, and likely to occur within the Project Area based upon available habitat, and observations made during on site surveys. The Applicant will consult with NHP, NYSDEC and USFWS to identify any potential species of concern;
 7. Identification and depiction of any Significant Coastal Fish and Wildlife Habitat Areas designated by NYS Department of State (NYSDOS) and/or NYSDEC and any unusual habitats or significant natural communities that could support federally or state-listed T&E, SSC, or SGCN, and;
 8. Description of potential impacts to calcareous shoreline outcrops and karst features, if present, and any species that may utilize these habitats if final site design indicates there could be impacts to these ecological communities.
- (e) The Application will include a plant and wildlife species inventory based on existing data available from the NHP, NYSDEC, USFWS, Herp Atlas, New York Breeding Bird Atlas (BBA), US Geological Survey (USGS) Breeding Bird Survey (BBS), Christmas Bird Count (CBC), eBird, The Nature Conservancy surveys/reports, Hawk Migration Association of North America (HMANA), and The Kingbird publication. On-site field surveys (*e.g.*, ecological cover type assessments, habitat assessments, and wetland delineations) and/or the availability of suitable habitat, will also be used to identify species that could potentially occur within the Facility site at some time during the year. The list will specify whether species were observed, known to occur in Facility site, or are predicted to occur based on habitat characteristics and historical records.
- (f) A summary narrative and associated mapping will be included in the Application to explain and illustrate potential and expected construction and operational impacts to vegetative cover types, wildlife habitats (including a discussion of impacts from habitat fragmentation), wildlife concentration areas, travel corridors, if identified, and terrestrial any, and aquatic organisms. The Application will discuss any direct and indirect construction-related impacts that may occur to wildlife and wildlife habitat, including but not limited to incidental injury and mortality due to construction activity and vehicular movement, habitat disturbance and loss associated with clearing and earth-moving activities, and the displacement of wildlife from preferred habitat. The Application will discuss potential direct and indirect operational impacts including but not limited to avian and bat collisions, loss of habitat, forest and grassland

fragmentation, and wildlife displacement. To the extent any documented wildlife travel corridors are identified within or adjacent to the Facility Site, direct and indirect impacts to such corridors will be addressed. The Application will also include a discussion of potential short- and long-term impacts to plants, animals, and habitats that may result from the application of biocides, if any, during site preparation, construction, maintenance, or operations. A summary impact table will be included that clearly quantifies anticipated temporary and permanent impacts associated with various Facility components in relation to wildlife habitats, identified concentration areas or travel corridors (to the extent data associated with such area/corridors are readily available or provided to the Applicant by NYSDEC or USFWS), and vegetation cover types, particularly grasslands and interior forests, if affected. Information regarding the presence of federally and state-listed T&E species, SCC, rare species, and SGCN, and the Facility's potential to impact such species or their habitats will also be discussed. Documented T&E species, SCC, and SGCN will be based on database records obtained from the NHP, other known records documented by NYSDEC, USFWS, and on-site wildlife and habitat, ecological, and wetland surveys. A summary impact table containing information on all species within these categories will be compiled and included in the Application. The presence of Facility components in occupied habitat of state listed T&E species may constitute take of individuals or the habitat they depend on, or both. If it is determined by the Applicant or NYSDEC that the construction or operation of the Facility is likely to result in the "take" of a listed species, including the modification of habitat on which a listed species depends, the Applicant will submit an avoidance, minimization and mitigation plan that demonstrates a net conservation benefit to the affected species pursuant to 6 NYCRR section 182.11 (Part 182), along with the informational requirements of an Incidental Take Permit (ITP), as provided for in Part 182. Further, the Applicant will consult with the NYS Department of Agriculture & Markets and the Cornell Cooperative Extension on potential effects of the Facility on orchard and field crop pollination as a result of Facility operation, and a discussion of this and other impacts to vegetation will be addressed in Exhibit 22.

- (g) A detailed description of the impact avoidance and minimization efforts used in developing the Facility will be included. The Facility design, construction controls, and operational measures that can be reasonably implemented to avoid, minimize, or mitigate impacts to wildlife and wildlife habitat within the Facility site will also be described. This will include a discussion of measures to avoid or minimize direct impacts to individuals of listed and protected species through appropriate curtailment regimes, and indirect impacts associated with habitat fragmentation and displacement. Measures to avoid, minimize or mitigate impacts to vegetation will be addressed in part (c) of Exhibit 22. In addition, a detailed alternatives analysis will be addressed in Exhibit 9, which will include discussion and comparison of known, estimated, and expected impacts to wildlife and habitat at alternative sites and the proposed Facility location.
- (h) The Application will discuss the Atlantic flyway, as appropriate, and include a discussion of the potential cumulative impacts of this Facility on bird and bat species and their habitats with respect to the other wind energy projects that are currently

operating or proposed wind energy projects in the vicinity of the Facility. Such a cumulative impact analysis will minimally include the following: acres of each habitat type lost directly through clearing and cover type conversion and indirectly due to functional loss/degradation of habitat; overall habitat fragmentation, and; estimated bird and bat mortality levels. This section will include avian and bat impact analysis and monitoring program descriptions including:

- (1) An identification, evaluation and assessment of direct and indirect Facility-related impacts to avian and bat species, particularly federally and state-listed T&E species and their habitats, wildlife concentration areas, and migration corridors, based on a discussion of the extent, methodology, and results of the avian and bat pre-construction studies conducted in support of permitting for the Facility, as well as pre- and post-construction wildlife surveys conducted at other wind projects in New York and the northeast, and any additional information provided by NYSDEC and USFWS. Such discussion will include the extent of and any expected impacts to wildlife from grassland and forest fragmentation, and cumulative impacts to wildlife and their habitats resulting from the construction and operation of the Facility. The respective NYSDEC Regional Wildlife Office(s) will be contacted to obtain the most recent breeding, wintering, and habitat data for listed species. Draft copies of all reports, including any associated maps and GIS shapefiles, will be provided to NYSDEC as soon as possible but no less than at least 30 days before an Application is submitted. Final reports incorporating comments provided by NYSDEC and USFWS, along with any other supplemental material or information requested by these agencies, may be included with the Application. The Application will also discuss avoidance and minimization practices, and the potential construction and operation-related impacts to protected avian and bat species. Avian and bat occupancy and usage of the Facility site will be compared with other existing and proposed wind energy projects in the vicinity of the Facility, based on a comparative analysis of pre- and post-construction wildlife studies completed at other wind projects in New York and the northeast for which data are publicly available; Analysis will include potential forest fragmentation impacts associated with the facility and cumulative avian species mortality estimates and forest fragmentation effects taking into account the estimated impacts associated with (1) the approximately 16-mile overhead 115 kV transmission line and related facilities to be constructed to connect the Project to the New York transmission grid that will be evaluated and certificated through a parallel and separate Article VII process, (2) general elements of the Canisteo Wind Energy Center within the Study Area, or (3) other existing or proposed wind turbines and related facilities within the Study Area (“Study Area” being the entirety of Steuben and Allegany Counties, and all other areas within a 5-mile radius from all Project components; “proposed wind turbines” being wind turbines that are part of a project for which an application under Article 10 of the PSL has been submitted to the Siting Board as of the date of submission of the Application for the Project). For the purposes of fragmentation analysis it is assumed that indirect effects will extend up to 300 feet beyond limits of disturbance.

- (2) A literature and impact analysis to assist in determining potential impacts to New York State threatened northern long-eared bat as a result of operation of the facility.
 - (3) A literature review assessing the potential population-level effects of wind-energy related mortality on a regional basis and estimated cumulative bat mortality associated with the proposed project and projects in the region.
 - (4) A plan to avoid or, where unavoidable, minimize and mitigate any such impacts during construction and operation of the Project based on existing information, the results of pre- and post-construction monitoring, and any known post-construction impacts that may occur. Details associated with a proposed post-construction monitoring program to be implemented to assess direct and indirect impacts of the Facility on avian and bat species and their habitats in a manner consistent with NYSDEC's *Guidelines for Conducting Bird and Bat Studies at Commercial Wind Energy Projects* (Guidelines), revised June 2016. This plan will include plans for all bird and bat species and not solely rare, threatened or endangered species. Exact details of the post-construction monitoring program will be determined on a site-specific basis through discussions between NYSDEC, USFWS, and the Applicant, and be in place prior to the start of Project operation.
 - (5) An outline of the bird and bat impact avoidance and minimization techniques, mitigation options, potential monitoring and adaptive management responses, and operational adjustments (*i.e.*, appropriate curtailment regimes) to be implemented at the Facility. If take of a listed species is likely, these measures will include the components of an Incidental Take Permit (see 6 NYCRR Part 182.11 for an itemization of the components) and be developed in consultation with NYSDEC. A post-construction monitoring plan will be required and specify construction parameters, operational adjustments, and mitigation measures sufficient to ensure the Applicant complies with the substantive requirements of Part 182.
- (i) Maps and GIS shapefiles depicting the field-delineated wetlands and adjacent areas (within a 200-foot wide corridor centered on linear Facility components, e.g., access roads, buried electrical interconnect, and within a 200-foot radius of turbines and other components such as permanent meteorological towers, O&M building, and substation) and approximate wetland boundaries and adjacent areas (within 500 feet of proposed Facility components) will be included in the application. Information on the onsite non-Article VII interconnections and predicted presence and extent of wetlands on the remainder of site properties and adjacent properties within 500 feet of areas to be disturbed by construction will also be included in the Application. For adjacent properties without accessibility, initial surveys may be based on remote-sensing data, interpretation of published wetlands and soils mapping, roadside observations and aerial photography. This delineation protocol shall apply to all wetlands and vernal pools. The shapefiles will include all Project components. On-site field delineations will consist of boundary flagging within a 200-foot wide corridor centered on linear Facility components (e.g., access roads, buried electrical interconnect), and within a

200-foot radius of turbines and other components such as permanent meteorological towers, O&M building, and substation. All wetland boundaries must be keyed to the submissions described in Stipulation 11 – 1001.11 Exhibit 11: Preliminary Design Drawings. The interpolated boundaries shown on site plans must be differentiated from field delineated boundaries when displayed on maps, site plans, and shapefiles. To define boundaries out to 500 feet from Facility components, the Applicant will use interpretation of aerial imagery signatures, on site-observations, analysis of topography, existing databases of hydric soils, and wetland mapping maintained by National Wetland Inventory (NWI) and NYSDEC. Wetlands identified in this way will be referred to as approximate wetlands.

- (j) The determination of wetland boundaries during on-site field delineations will be made according to the three-parameter methodology described in the U.S. Army Corps of Engineers (Corps) *Wetland Delineation Manual* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: North central and Northeastern Region* and the *New York State Wetlands Delineation Manual* (July 1995). Vernal pools shall be delineated in accordance the *Regional Supplement*. Wetland boundaries will be defined in the field by sequentially numbered pink surveyor’s flagging marked “wetland delineation”, which will be located using Global Positioning System (GPS) technology with reported sub-meter accuracy. Wetlands identified by these methods will be referred to as delineated wetlands (ultimately wetlands that are verified by the Corps and NYSDEC will be referred to as jurisdictional wetlands).
- (k) A description of the characteristics of all federal, state and locally regulated wetlands delineated above, including the Cowardin classification, and a description of the vegetation, soils, and hydrology data collected for each of wetland sites identified, based on actual on-site wetland observations. Copies of all Wetland Determination Data Forms will be included in a Wetland and Stream Delineation Report and appended to the Application.
- (l) A qualitative and descriptive wetland functional assessment, including seasonal variations, for all wetlands delineated above.
- (m) Qualitative assessment scores for each delineated wetland in order to assess functions and values of delineated wetlands will be based on a methodology similar to *The Highway Methodology Workbook Supplement, Wetlands Functions and Values: A Descriptive Approach* published by the U.S. Army Corps of Engineers New England District in 1999 or the *Ohio Rapid Assessment Method for Wetlands, Version 5.0* published by the Ohio EPA, Division of Surface Water in 2001. The functions/values evaluated using this method will include:
 - 1. Groundwater recharge/discharge;
 - 2. Floodflow alteration;
 - 3. Fish and shellfish habitat;

4. Sediment/toxicant/pathogen retention;
 5. Nutrient removal/retention/transformation;
 6. Production export;
 7. Sediment/shoreline stabilization;
 8. Wildlife habitat;
 9. Recreation;
 10. Education/scientific value;
 11. Uniqueness/heritage;
 12. Visual quality/aesthetics;
 13. Threatened or endangered species habitat.
- (n) As described above in 22(i), wetland boundaries within 500 feet of all Facility components will be delineated and mapped using interpretation of aerial imagery signatures, on-site observations, analysis of topography, existing data bases of hydric soils, and wetland mapping maintained by NYSDEC and NWI. The Application will include a description of the hydrologic connectivity of all wetlands within the Facility site, including a summary of those wetlands anticipated to fall under NYSDEC jurisdiction (under Article 24 of the Environmental Conservation Law) and USACE jurisdiction (under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act). Assessments of potential state and/or federal jurisdictional wetlands jurisdiction will include “unmapped wetlands” that meet the NYSDEC’s 12.4 acre size threshold (including any wetlands separated by less than 50 meters or with discernable surface hydrological connections which function as a unit in providing wetland benefits, pursuant to 6 NYCRR 664, or otherwise meet state criteria for jurisdiction (e.g. wetlands or vernal pools determined to be of Unusual Local Importance, pursuant to 6 NYCRR 664.7[c]). Determination of connectivity of delineated wetlands to other wetlands will be informed by observations, examination of topographical maps, and aerial imagery. A summary will be provided of off-site wetlands adjacent to the Facility site that may be hydrologically or ecologically influenced by development of the Facility, including Significant Coastal Fish and Wildlife Habitat Areas designated by the NYS Department of State (DOS), and public lands, to determine their general characteristics and relationship, if any, to the delineated wetlands within the Facility site. All information, including shapefiles of delineated wetlands suitable for use in GIS software via ESRI’s ArcGIS suite of software (e.g. ArcMap), will be provided to NYSDEC as soon as delineations are completed and before the Application is submitted, to allow for NYSDEC to determine the full extent of state wetland jurisdiction.
1. The wetland study area was defined by disturbance limits including:

- i. 200-foot radius around each turbine center point
 - ii. 200-foot corridor for proposed access roads, collection lines, and transmission line routes
 - iii. 100-foot buffer around construction areas for associated substations, laydown yards, and the O&M building
 - iv. 500-foot radius for potential impacts to secondary wetlands
- (o) An identification and quantification of temporary and permanent impacts to wetlands (and any state-regulated 100-foot adjacent areas) based on the proposed footprint of all Facility components and associated impact assumptions. Such impacts will be presented in a table that identifies the page number on preliminary design drawings depicting the resource, type of impact and associated crossing methodology, clearly discerning between federal and state wetland (and 100-foot adjacent area) impacts. This assessment will also include a description of applicable permanent forest conversion, if any, which would occur as a result of the construction of the Facility. Calculation of impacts to both wetland and 100-foot adjacent areas of state-regulated wetlands will include the type of impact, including but not limited to permanent or temporary fill and forest conversion and be provided in the table format with associated delineation and NYSDEC code.
- (p) A general discussion of measures considered, and indication of methods to be implemented to avoid wetland impacts, including stream crossing methodology and a description of Facility construction and operation in relation to the standards established by ECL Article 15. It is anticipated that direct impacts to wetlands and streams will be minimized by utilizing existing or narrow crossing locations whenever possible. Additional measures may include consideration of alternative siting or routing options, special crossing techniques, equipment restrictions, herbicide use restrictions, and erosion and sedimentation control measures. Where impacts are unavoidable, the anticipated mitigation measures to be implemented to offset impacts to wetlands (and any state-regulated 100 foot adjacent areas) will be discussed, including the use of reasonable alternative stream and wetland crossing methods. Pursuant to 6 NYCRR 663.5(g), mitigation for impacts to state-regulated wetlands and adjacent areas must meet the following provisions: (i) the mitigation must occur on or in the immediate vicinity of the Facility; (ii) the area affected by the proposed mitigation must be regulated by the Freshwater Wetlands Act and 6 NYCRR Part 663 after mitigation measure are completed, and; (iii) the mitigation must provide substantially the same or more benefits than will be lost through the proposed activity. The Application's discussion of avoidance and minimization must be updated upon final verification of wetland boundaries and jurisdictional determinations. Final impact calculations to the 100 foot adjacent area of state-regulated wetlands and associated mitigation will be based on verified delineation boundaries. Alternative analysis will be based on the final verified delineation boundaries. This section of the Application will also describe the anticipated Environmental Compliance and Monitoring Program (ECMP) to be implemented during Facility construction to adhere to various permit conditions and

protect wetlands, streams, and other waterbodies. The Facility's ECMP will include an Environmental Monitor(s) during construction and restoration activities on the Facility site. The duties of the Environmental Monitor will be described in this Exhibit of the Application.

1. Provide a table of all State-regulated wetlands, Federal wetlands, streams, and environmentally sensitive areas that could potentially be impacted by the proposed Project as depicted in preliminary design drawings or wetland delineations.
 2. Identify the corresponding page number on preliminary design drawings depicting the resource.
 3. Include wetland delineation types, NYSDEC stream classifications, and descriptions of resources within environmental sensitive areas.
 4. For each resource explain if the resource could reasonably be avoided.
 5. Propose site specific actions to minimize impacts to resources that are not bypassed.
 6. Propose site specific actions to mitigate impacts to resources that are not bypassed.
- (q) An identification of federally and state-listed endangered or threatened species documented within or near the Project site, along with a discussion of all potential direct and indirect impacts to these species that may occur as a result of Project construction, operation, or maintenance. A Threatened and Endangered Species Mitigation Plan, if needed, will also be included.
- (r) An invasive species prevention and management plan indicating the presence of invasive species and measures that will be implemented to minimize the introduction of new invasive species and spread of invasive species during soil disturbance, vegetation management, transport of materials, and landscaping/revegetation (including specification of native seed mix to be utilized where appropriate).
- (s) A list of the species of mammals, birds, amphibians, and reptiles reasonably likely to occur on, or in the vicinity of the Project site based on site observations and supplemented by publicly available sources.
- (t) A quantification and an analysis of the temporary and permanent impacts of the construction and operation of the Project and the onsite non-Article VII interconnections on agricultural resources based on the proposed footprint of all Project components and associated impact assumptions. 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*. Mitigation protocol post-construction will also adhere to guidelines set forth by NYSDAM. This section of

the Application will also include a map of the Facility Site showing locations of prime farmland, prime farmland if drained, unique farmland, and farmland of state and local importance, if such information is readily available in public databases. This section of the Application will also discuss methods for identifying drainage tile lines prior to construction, along with restoration of any tile lines impacted by Facility construction activities. This information will also be referenced in Exhibit 4 (Land Use) and Exhibit 21 (Geology, Seismology and Soils).

- (u) Shapefiles suitable for use in Geographical Information Systems (GIS) software via ESRI's ArcGIS suite of software (e.g. ArcMap) containing all components as described in 22(a-q) and in NYSDEC 2016 *Guidelines*, shall be submitted confidentially with the Application and to NYSDEC as soon as possible but no less than 30 days before the Applicant submits an Article 10 Application.

Stipulation 23 – 1001.23 Exhibit 23: Water Resources and Aquatic Ecology

This exhibit will include a study of the Project impacts to groundwater resources, surface water resource, and associated aquatic ecologies, including identification and mapping of existing conditions, an in-depth impact analysis of the Project and proposed impact avoidance and mitigation measures.

Exhibit 23 shall contain the following with regard to:

- (a) Groundwater:
 - (1) Hydrologic information reporting depths to high groundwater and bedrock, including a site map showing depth to high groundwater in increments appropriate for the Project site based on a map titled “*Unconsolidated Aquifers in Upstate New York*” and obtained through the DEC.
 - (2) A map based on publicly available information from the DEC Division of Water Resources, Bureau of Water Management, the USGS Office of Groundwater, USDA Soil Conservation Service, Soil Survey of Steuben County, and USDA NRCS Web Soil Survey online resource, and data collected during subsurface investigations on the Project site showing all areas within the Study Area delineating all groundwater aquifers and groundwater recharge areas, and identifying groundwater flow direction, groundwater quality, and the location, depth, yield and use of all public and private groundwater wells or other points of extraction of groundwater located within the Project area and within one mile of the Project Area, and including delineation of well head and aquifer protection zones, where publicly available. In addition to this information, the Applicant will obtain information on the location of public water supplies in the area by contacting the New York State Department of Health, Hornell District Office or local municipal code enforcement officers, as Steuben County Department of Health is a partial service county health department. Any freedom of information requests will be directed to the New York State Department of Health, Records Access Office.
 - (3) The Applicant will distribute a water well survey to local residents, businesses, and property owners to identify the locations of private water supply wells within the Project Area and within one mile of the Project area and solicit well construction details, usage patterns, and water quality data, if available. The well survey will include information about the Project and Article 10, ways to contact Project personnel and how survey recipients can get additional information regarding the Project.
 - (4) The Applicant will provide a table summarizing the location, depth, usage, and water quality data obtained for all identified public and private water wells.
 - (5) The locations of public and private water wells should be verified through field observations where property access rights are obtained by the Applicant. Water well locations will be indicated on maps showing groundwater aquifer,

distinguishing whether each well location is approximate or confirmed. GIS data for the public and private well locations will be provided to DPS Staff.

- (6) An analysis and evaluation of potential impacts (during normal and drought conditions) from the construction and operation of the Project on drinking water supplies, groundwater quality and quantity in the Project Area, taking into account data collected regarding the nature and extent of existing groundwater contamination on the Project site, including potential impacts on public and private water supplies, including private wells within a one-mile radius of the Project Area, and wellhead and aquifer protection zones.
- (7) Plans for notification and complaint resolution during construction of the Project for owners/operators of public and private wells within a one-mile radius of the Project Area.

(b) Surface Water:

- (1) A map, at a scale that supports legibility, identifying all surface waters, including intermittent streams and wetlands, within and adjacent to the Facility using data from the NYSDEC, ESRI, Steuben County, U.S. Geological Survey (“USGS”), National Wetlands Inventory, and stream data collected during the on-site wetland delineation. Wetland and stream delineations will identify all surface waters (ponds and ephemeral, intermittent, and perennial streams) within 100 feet of proposed access roads, electrical interconnection, and buried electrical collection lines, within 200 feet of all turbines, and within 100 feet of all proposed construction work areas. Stream mapping outside of these areas will be based on NYSDEC mapping and stream classifications and other mapping sources as applicable.
- (2) A description of the New York State listed Water Classification and Standards, physical water quality parameters, flow rate, general aquatic ecologies, and the absence or presence of common invasive species identified by the DEC. 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 site observations.
- (3) An identification of any downstream surface water drinking-water supply intakes within one mile, or if none within one mile, an identification of the nearest one (giving location of the intakes by longitude and latitude) that could potentially be affected by the facility or onsite non-Article VII interconnections, including characterization of the type, nature, and extent of service provided from the identified source.
- (4) Approximations of acreage and linear distance of surface waters to be temporarily or permanently impacted will be presented in table form in the Application. Such impacts will be presented in a table that identifies the type of impact (*e.g.*, buried collection, access road) and associated crossing methodology

and protection measures (*e.g.*, HDD with appropriate bore pit setbacks, access road utilizing stream crossings guidelines and Best Management Practices [BMPs]). Also, the mitigation elements to be pursued will be stated to limit and safeguard the approved impact amounts on the associated surface water resource. Any crossing of DEC 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 DEC and the DPS. The Article 10 Application will include a detailed description of proposed sediment and erosion control measures, and the Preliminary Design Drawings prepared in support of Exhibit 11 will include typical details of such measures considering the location of this Facility and associated resources of concern. The Applicant will describe the nature of the Article VII facility in relation to the sediment control plans so as to evaluate the anticipated effects of both the Facility and the regional transmission facility (RTF).

- (5) An identification and evaluation of reasonable avoidance measures and facility layout alternatives, and where impacts are unavoidable, mitigation measures, including the use of water storage, stormwater reuse, and offsetting water conservation, regarding groundwater impacts. Once the Applicant identifies which streams will be crossed work prohibition dates will be established. Proposed crossing methods will need to meet the DEC stream crossing guidelines. The Application will include preliminary engineering plans for stream crossings.
- (c) Information on stormwater, including:
- (1) Prior to commencement of construction operations, the Applicant will submit to NYSDEC a Notice of Intent for Stormwater Discharges from Construction Activity and will seek coverage under the SPDES General Permit issued in January 2015 and effective on January 29, 2015 (modified July 15, 2015) at <http://www.dec.ny.gov/chemical/43133.html>. A preliminary stormwater pollution prevention plan (“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.
 - (2) The preliminary SWPPP identified in Stipulation 23(c) (1) 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.

(d) Chemical and Petroleum Bulk Storage:

- (1) A description of the Spill Prevention, Control, and Countermeasure (SPCC) plan that will be in place for the small volumes of chemical, petroleum or hazardous substances that may be stored on site. Spill containment requirements for electric transformers at the substation and turbines sites will be provided.
- (2) 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 all State laws and guidelines will be followed.
- (3) 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 any local laws. 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 all local laws and guidelines will be followed.

(e) Aquatic Species and Invasive Species:

- (1) An analysis of the impact of the construction and operation of the facility on biological aquatic resources, including species listed as endangered, threatened, or species of special concern in 6 NYCRR Part 182, and including the potential for introducing and/or spreading invasive species. *See* Stipulation 23(b) (2) above for additional information on invasive species.
 - (2) An identification and evaluation of reasonable avoidance measures and, where impacts are unavoidable, mitigation measures regarding impacts on such biological aquatic resources, including species and invasive species impacts (if any) and assure compliance with applicable water quality standards (6 NYCRR Part 703). *See* Stipulation 23(b) (2) above for additional information on invasive species.
- (f) This Project will not utilize cooling water during any phase of construction or operation and, therefore, cooling water withdrawals will not be addressed in the Application.

Stipulation 24 – 1001.24 Exhibit 24: Visual Impacts

The Application will include a visual impact assessment (VIA) to determine the extent and assess the significance of Project visibility. The components of the VIA will include identification of visually sensitive resources, viewshed mapping, confirmatory visual assessment fieldwork, visual simulations (photographic overlays), cumulative visual impact analysis, and proposed visual impact mitigation.

- (a) The VIA will address the following issues:
- (1) The character and visual quality of the existing landscape. 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 based on areas of similar landscape/aesthetic character, such as landform, vegetation, water resources, land use, and user activity.
 - (2) Visibility of the Project, including visibility of Project operational characteristics.
 - (3) Visibility of relevant and important aboveground interconnections that may potentially provide additional vertical profiles and visual impacts.
 - (4) Appearance of the Project upon completion, including building/structure size, architectural design, facade colors and texture, and site lighting.
 - (5) Lighting (including lumens, location and direction of lights for facility Area and/or task use, safety including outdoor lighting at O&M buildings, storage areas, substation or switchyard sites, worker safety and tall structure marking requirements) and similar features including a discussion on the minimization of upward-directed lighting.
 - (6) Representative views (photographic overlays) of the Project from select resource locations representing as practical as possible, views from the north, south, east, and west compass locations.
 - (7) Nature and degree of visual change resulting from construction of the Project and relevant and important aboveground onsite non-Article VII interconnections as noted in Stipulation 24 (a)(3) above.
 - (8) Nature and degree of visual change resulting from operation of the Project.
 - (9) Analysis and description of related operational effects of the Project such as visible plumes, shading, glare, and shadow flicker. A description of the shadow flicker analysis methodology and related impacts will be included in the Application. Additional information will address the potential for cumulative visual impacts of shadow flicker within the Study Area. Discussion of potential human health-related impacts associated with visual impacts, such as shadow

flicker, associated with the operation of this facility will be included in Exhibit 15.

- (10) Proposed mitigation and mitigation alternatives based on an assessment of mitigation strategies including screening (landscaping), architectural design, visual offsets, relocation or rearranging facility components, reduction of facility component profiles, alternative technologies, facility color and design, shadow flicker mitigation options, lighting options for work areas and safety requirements, and lighting options for aviation obstruction lighting if required by the FAA.
 - (11) A description of all visual resources that are within a radius of at least five miles from all generating facility components and related facilities and alternative location sites that would be impacted by the Project as discussed in paragraph 24(b)(1) below. Visual resources out to ten miles have also been considered to determine if there are any outstanding visual resources that are of concern in the region.
 - (12) Potential cumulative visual impacts within the Study Area. As used in this Stipulation 24, cumulative visual impacts (or cumulative viewshed impacts) are any significant visual impacts on the environment that result from the incremental or increased visual impacts of the Project when the visual impacts of the Project are added to the visual impacts of (1) the approximately 16-mile overhead 115 kV transmission line and related facilities to be constructed to connect the Project to the New York transmission grid that will be evaluated and certificated through a parallel and separate Article VII process, (2) general elements of the Canisteo Wind Energy Center within the Study Area, or (3) other existing wind turbines and related facilities within the Study Area (“Study Area” being with a 10-mile radius from all Project components; “proposed wind turbines” being wind turbines that are part of a project for which an application under Article 10 of the PSL has been submitted to the Siting Board as of the date of submission of the Application for the Project).
- (b) The viewshed analysis component of the VIA will be conducted as follows:
- (1) A digital GIS based viewshed analysis will be prepared using ESRI ArcGIS Spatial Analyst software for this Project and will include vegetated tree groups to realistically depict the surrounding landscape. The results will be prepared and presented on a 1:24,000 scale current USGS base map. A line of sight profile shall also be done for resources of statewide concern located within the VIA study area (area within a radius of ten miles from all generating facility components and related facilities and alternative location sites). The viewshed maps shall provide an indication of areas of potential visibility based on topography and vegetation and the highest elevation of Project structures. The potential screening effects of vegetation shall also be shown. The map(s) shall be divided into foreground, midground and background areas based on visibility distinction and distance zone criteria. Visually-sensitive sites, cultural and

historical resources, representative viewpoints, photograph locations, and public vantage points, and landscape similarity zones within the viewshed study area shall be included on the map(s) or an overlay. An overlay indicating landscape similarity zones shall be included.

- (2) The VIA will include a detailed description of the methodology used to develop the viewshed maps, including software, baseline information, and sources of data.
- (3) The viewshed mapping will be used to determine potential visibility of viewer groups in the facility vicinity. Viewer groups will include recreational areas (i.e., golf course, state and local parks, recreational waterways, etc.), residences, businesses, listed State or National Register of Historic Places sites, and travelers (interstate and other highway users).
- (4) The applicant shall confer with the appropriate municipal representatives, DPS, DEC and OPRHP. Viewpoint selection will be based upon the following criteria:
 - (i) Representative or typical views from unobstructed or direct line-of-sight views from locations predicted to have direct line-of-sight visibility of facilities components, based on results of preliminary viewshed mapping.
 - (ii) Significance of viewpoints designated scenic resources, areas or features which features typically include, but are not limited to: landmark landscapes; 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; state parks or historic sites; sites listed on or eligible for listing on National or State Registers of Historic Places; areas covered by scenic easements, public parks or recreation areas; nearby NYS Forest Lands, locally designated historic or scenic districts and scenic overlooks; National Rivers Inventory listed or candidate waterways; and high-use public areas.
 - (iii) Level of viewer exposure, i.e., frequency of viewers or relative numbers, including residential areas, or high volume roadways.
 - (iv) Proposed land uses.
 - (v) Input from local public sources. Input on the identification of significant local viewpoints has been solicited through an information request mailed out to 39 stakeholders (municipalities, historians, agencies, etc.). Results will be utilized to inform the VIA and photo-simulations.
 - (vi) Building/structure data collected for each potentially eligible property in a format acceptable to OPRHP and DPS and submitted to OPRHP and DPS for review prior to completing the viewpoint selection.

- (5) Photographic simulations using a three-dimensional model of the Project built according to turbine and site engineering specifications shall be prepared from select viewpoint locations. Photographs to be used in simulations will be acquired during site visits and will represent leaf-off conditions. An appropriate number of candidate locations for simulations will be chosen resulting from a number of preliminary investigations, surveys and stakeholder input, 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 agency and municipal stakeholders, including the host towns of Greenwood and West Union, to assist in the selection of final viewpoints for simulations.
- (6) Though vegetative screening and other mitigation may be required in the Project, it is difficult to completely mitigate and provide full vegetative screening for tall structures such as wind turbines. However, screening at some receptor locations or screening at facility components, such as substation or equipment storage yards, is feasible. Discussion of other general mitigation strategies such as design, appearance, lighting, siting, and layout will be discussed in the Application.
- (7) Each set of existing and simulated view of the Project shall be compared and rated and the results of the VIA shall be summarized. Documentation of the steps followed in the rating and assessment methodology shall be provided including results of rating impact panels and a description of the qualifications of the individuals serving on the panels. Where visual impacts from the proposed Project are identified, potential mitigation measures shall be outlined, and the extent to which they effectively minimize such impact shall be addressed. As appropriate, additional information will address the potential for cumulative viewshed impacts within the Study Area.
- (8) As applicable to the proposed Project technology, the analysis shall include analyses of overall appearance and operational characteristics of the Project and related facilities, including shading, glare, shadow flicker, or related visible effects of facility operations, including an assessment of the predicted extent, frequency and duration of any such visible effects created by the Project. A detailed scope and methodology for analyzing shadow flicker induced by wind turbine operation including methods, assumptions, study areas and distance zones, input criteria, and presentation media (maps, figures, etc.) is attached as Attachment B.

Stipulation 25 – 1001.25 Exhibit 25: Effect on Transportation

Exhibit 25 shall contain:

- (a) A conceptual plan that will identify access road locations and widths, including characterizations of road intersection suitability. Also, a route evaluation study will be prepared for the Project and included in the 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.
- (b) A description of pre-construction characteristics of roads in the vicinity of the Project, including:
 - (1) A review of existing data on vehicle traffic, use levels and accidents. Data will be obtained from the New York State Department of Transportation (“DOT”) 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 detailed roadway descriptions included Exhibit 25 will show existing vehicle traffic, general use levels, accident occurrence levels, and emergency response vehicle departure routes to and from the Project. A review of transit facilities and routes, including areas of school bus service.
 - (2) An identification of potential approach and departure routes to and from the Project site for police, fire, ambulance and other emergency vehicles.
 - (3) The load bearing and structural rating of existing roads will be specified in the detailed roadway descriptions. Local, state and federal transportation agencies, highway departments, and emergency responders will be consulted with throughout this process.
 - (4) The Project site is not within a congested urbanized area, therefore 24-hour traffic volume counts and peak turning movement counts for typical weekday morning, weekday afternoon, and Saturday peaks, at representative critical intersections are not applicable and will not be included in the Application.
- (c) The Study will include an estimate of the trip generation characteristics of the Project during both construction and operation. The estimate will include:
 - (1) For each major phase of construction, and for the operation phase, an estimate of the number and frequency of vehicle trips, including time of day and day of week arrival and departure, distribution, by size, weight and type of vehicle.
 - (2) An identification of approach and departure routes to and from the Project site out to a 5-mile distance for vehicles carrying water, fuel oil, bulk fuels, chemicals or hazardous materials for construction or operation of the Project.

- (3) For major cut or fill activity (spoil removal or deposition at the Project site and affected onsite non-Article VII interconnection areas), a separate estimate of the number and frequency of vehicle trips, including time of day and day of week arrival and departure, distribution, by size, weight and type of vehicle.
 - (4) An identification of approach and departure routes to and from the Project site for construction workers and employees of the Project.
- (d) The Study will include an analysis and evaluation of the traffic and transportation impacts of the Project, including:
- (1) Because the Project should have no significant impact on traffic following the construction phase, no analysis of future traffic conditions with and without the Project will be prepared.
 - (2) An evaluation of the adequacy of the road system to accommodate the projected traffic, the analysis to be conducted separately for the peak construction impacts of the Project and for the typical operations of the completed Project.
 - (3) An assessment of over-size load deliveries and the adequacy of roadway systems to accommodate oversize and over-weight vehicles; improvements necessary to accommodate oversize or overweight deliveries; impacts associated with such improvements; and mitigation measures appropriate to minimize such impacts.
 - (4) An identification and evaluation of practicable mitigation measures regarding traffic and transportation impacts if needed, including timing restrictions, the use of alternative technologies, the construction of physical roadway improvements, and the installation of new traffic control devices as well as the repair of local roads due to the damage by heavy equipment or construction activities during construction or operation of the Project. Additionally, the study will evaluate the potential for increased accidents and potential impacts to school bus transportation and/or emergency vehicle responses as a consequence of construction or utilization of these improvements.
 - (5) A description of all road use and restoration agreements, if any, between the Applicant and landowners, municipalities, or other entities, regarding documentation and repair of local roads damaged by heavy equipment or construction activities during construction or operation of the Project.
 - (6) Potential cumulative traffic and transportation impacts within the Study Area. As used in this Stipulation 25, cumulative traffic/transportation impacts are any significant impacts on traffic or transportation that result from the incremental or increased traffic/transportation impacts of the Project when the traffic/transportation impacts of the Project are added to the traffic/transportation impacts of (1) the approximately 16-mile overhead 115 kV transmission line and related facilities to be constructed to connect the Project to the New York transmission grid that will be evaluated and certificated through a parallel and separate Article VII process, (2) general elements of the Canisteo Wind Energy

Center within the Study Area, or (3) other existing wind turbines and related facilities within the Study Area (“Study Area” being within a 5-mile radius from all Project components; “proposed wind turbines” being wind turbines that are part of a project for which an application under Article 10 of the PSL has been submitted to the Siting Board as of the date of submission of the Application for the Project).

- (e) 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 Application will include a predictive analysis report from the Capitol Airspace Group (“CAG”) which will provide elevation descriptions for siting considerations in order to insure that the siting of turbines will not adversely impact aviation safety.
- (f) 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 initiate aeronautical studies (including outreach to Department of Defense [“DoD”] for their input) in order to make a determination as to whether or not the proposed structures presents a hazard to navigation. Aeronautical studies will be underway at the time of the Application filing, and any determinations available at that time will be included. This section of Exhibit 25 will include:
 - (i) A statement that the Applicant has informally consulted with the DoD.
 - (ii) Correspondence the Applicant has with airports, heliports, if any.
 - (iii) A statement that any hazards to navigation that may be identified by the FAA and / or DoD will be mitigated or avoided.
 - (iv) All responses from the DoD and FAA, if any.

Stipulation 26 – 1001.26 Exhibit 26: Effect on Communications

Exhibit 26 shall contain:

- (a) The Applicant will consult with the Steuben County Office of Emergency Services, Steuben County Sheriff's Office, and NYS Division of Homeland Security & Emergency Services to assess any effects on communication services, with particular respect to emergency services, or potential impacts on the communication network for the NYS Early Warning Weather Detection System. An identification of all existing broadcast communication sources within a two-mile radius of the facility and the electric interconnection between the Project and the point of interconnection, unless otherwise noted, including:
 - (1) AM radio.
 - (2) FM radio.
 - (3) Television.
 - (4) Telephone.
 - (5) Microwave transmission (all affected sources, not limited to a two-mile radius).
 - (6) Emergency services.
 - (7) Municipal/school district services.
 - (8) Public utility services.
 - (9) Doppler/weather radar (all affected sources, not limited to a two-mile radius).
 - (10) Air traffic control (all affected sources, not limited to a two-mile radius).
 - (11) Armed forces (all affected sources, not limited to a two-mile radius).
 - (12) Global positioning systems ("GPS").
 - (13) LORAN (all affected sources, not limited to a two-mile radius).
 - (14) Amateur radio licenses registered to users.
- (b) Due to the remote location of the Project, there are not anticipated to be any underground cables or fiber optic lines within two miles of the Project Area and the onsite non-Article VII electrical interconnection between the Project and the point of interconnection. 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. The Project will avoid any impacts to underground cables or fiber optic lines. The Applicant will contact Steuben County to confirm identification of any fiber potentially connecting radio towers.

- (c) A statement describing the anticipated effects of the proposed Project and the electric interconnection between the Project and the point of interconnection on the communications systems required to be identified pursuant to subdivision (a) and (b) of this stipulation, including the potential for:
 - (1) Structures to interfere with broadcast patterns by re-radiating the broadcasts in other directions.
 - (2) Structures to block necessary lines-of-sight.
 - (3) Physical disturbance by construction activities. The Applicant will consult with Dig Safe New York (“DSNY”) prior to the commencement of any construction activities to obtain maps of any buried cables within two miles of the Project Area.
 - (4) Adverse impacts to co-located lines due to unintended bonding.
 - (5) Any other potential for interference.
- (d) An evaluation of the design configuration of the proposed Project and electric interconnection between the Project and the point of interconnection demonstrating that there shall be no adverse effects on the communications systems required to be identified pursuant to subdivision (a) and (b) of this stipulation.
- (e) 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.
- (f) The Applicant will provide written notification of the Project to the National Telecommunications and Information Administration (“NTIA”), of the U.S. Department of Commerce. Upon receipt of a notification, the NTIA will provide plans for the proposed Project to the federal agencies represented in the Interdepartment Radio Advisory Committee. 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 be in Exhibit 26.

In addition, initial contact has been made with the CAG to identify any potential obstacle clearance surfaces established by the FAA located within the Study Area. The CAG conducted an obstruction evaluation and airspace analysis overlaying the Study Area. The study identified proximity to airports, published instrument procedures, en route airways, civil minimum instrument flight rules altitude and minimum vectoring altitude charts, special use airspace, and military training routes.

Stipulation 27 – 1001.27 Exhibit 27: Socioeconomic Effects

Exhibit 27 shall contain:

- (a) An identification of the estimated construction work force by discipline associated with the Project. The Application should include the construction workforce estimates used in developing the actual budget estimated for the Project. These workforce estimates may also be developed using a job impact modeling tool. 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. All input data and work files used to develop these direct construction job estimates will be provided in electronic file format.
- (b) An estimate of the annual construction payroll, by trade, for each year of construction and an estimate of annual direct non-payroll expenditures likely to be made in the vicinity of the Project during the period of construction. These estimates may be developed using a job impact model. These estimates will be further refined and detailed in Exhibit 27 of the Application. All input data and work files used to develop these estimates will be provided in electronic file format.
- (c) An estimate of the annual secondary employment and economic activity likely to be generated in the vicinity of the Project by the construction of the plant. These estimates 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. All input data and work files used to develop these estimates will be provided in electronic file format.
- (d) An estimate of the number of jobs and the on-site payroll, by discipline, during a typical year once the plant is in operation, and an estimate of other expenditures likely to be made in the vicinity of the Project during a typical year of operation. These estimates may be developed using a job impact model. These estimates will be further refined and detailed in Exhibit 27 of the Application. All input data and work files used to develop these estimates will be provided in electronic file format.
- (e) An estimate of the annual secondary employment and economic activity likely to be generated in the vicinity of the Project by its operation. These estimates may be developed using a job impact model. These estimates will be further refined and detailed in Exhibit 27 of the Application. The analysis of secondary employment and economic activity should also consider an analysis of other impacts such as the economic impact associated with the cancellation of new power plants (if applicable) made unnecessary by the added wind capacity of the Project and the economic impacts associated with possible changes in the price of electricity due to the Project, to reflect wind power incentives and subsidies (in the event that the Applicant does not identify any such impacts it will explain why). All input data and work files used to develop these estimates will be provided in electronic file format. All input data and work files used to develop these estimates will be provided in electronic file format.

- (f) An estimate of incremental school district operating and infrastructure costs due to the construction and operation of the Project, this estimate to be made after consultation with the affected school districts.
- (g) An estimate of incremental municipal, public authority, or utility operating and infrastructure costs that will be incurred for police, fire, emergency, water, sewer, solid waste disposal, highway maintenance and other municipal, public authority, or utility services during the construction and operation phases of the Project (this estimate to be made after consultation with the affected municipalities, public authorities, and utilities).
- (h) A list of jurisdictions that are anticipated to have economic benefits due to the Project and an identification of all jurisdictions (including benefit assessment districts and user fee jurisdictions) that levy real property taxes or benefit assessments or user fees upon the facility site, its improvements and appurtenances and any entity from which payments in lieu of taxes will or may be negotiated.
- (i) For each jurisdiction, an estimate of the incremental amount of annual taxes (and payments in lieu of taxes ["PILOT"]) it is projected to be levied against the post-construction Project, its improvements and appurtenances. The Applicant anticipates entering into PILOT agreements and/or host community agreements with some or all of the local tax jurisdictions within the Project Area. The Applicant will continue to coordinate with municipal officials and provide an update to this information in Exhibit 27 of the Application.
- (j) The Project is not expected to result in additional costs to local tax jurisdictions but any such costs would be more than offset from significant benefits from the Project by entering into PILOT agreements and/or host community agreements. Exhibit 27 of the Application will contain a comparison of the fiscal costs and benefits to each jurisdiction in the Project area that are expected to result from the construction and operation of the Project.
- (k) An analysis of whether all contingency plans to be implemented in response to the occurrence of a fire emergency or a hazardous substance incident can be fulfilled by existing local emergency response capacity, and in that regard identifying any specific equipment or training deficiencies in local emergency response capacity (this analysis to be made after consultation with the affected local emergency response organizations).
- (l) Exhibit 27 of the Application will present a detailed statement of how the Project would be consistent with ECL § 6-107 Smart Growth criteria, or why compliance would be impracticable.

Stipulation 28 – 1001.28 Exhibit 28: Environmental Justice

Exhibit 28 shall contain:

- (a) A statement that because environmental justice areas are outside of the Project Area, the Project is not expected to negatively impact these or any other environmental justice areas. Therefore, the full Environmental Justice Analysis required by 6 NYCRR § 487.6 is not required.
- (b) A figure and descriptions of the closest potential environmental justice areas to the Project Area located in Alfred in Allegany County and Hornell in Steuben County, neither of which fall within the Project Area.

Stipulation 29 – 1001.29 Exhibit 29: Site Restoration and Decommissioning

Exhibit 29 shall contain:

- (a) A statement of the performance criteria proposed for site restoration in the event the Project cannot be completed and for decommissioning of the Project, including a discussion of why the performance criteria are appropriate. Among other things, the statement shall address:
 - (1) Safety and the removal of hazardous conditions.
 - (2) Environmental impacts.
 - (3) Aesthetics.
 - (4) Salvage and recycling.
 - (5) Potential future uses for the site.
 - (6) The useful life of the Project.
 - (7) Restoration monitoring.
- (b) The Applicant agrees to provide the following:
 - (1) Preliminary per-turbine decommissioning and per-foot of access road restoration estimates. If a turbine model is not selected at the time of Application submission, the per-turbine estimate shall be based on the model, from the list of potential options, with the highest decommissioning estimate; and
 - (2) A plan for the decommissioning and restoration of the Project site including how such decommissioning and restoration shall be funded and a schedule with defined period of time for determining when the conduct of decommissioning and site restoration activities would be initiated.
- (c) A description of all site restoration, decommissioning and guaranty/security agreements between the Applicant and landowner, municipality, or other entity, including provisions for turbines, foundations, and electrical collection, transmission and interconnection facilities. Justification shall be provided in the Application regarding the proposed type of financial assurance that will be provided for decommissioning activities. The justification shall include a brief description of potential financial assurance options and an explanation as to why the Applicant believes its proposed instrument is more appropriate than other options.
- (d) Information related to nuclear power facilities will not be included in the Application.

Stipulation 30 – 1001.30 Exhibit 30: Nuclear Facilities

This requirement is not applicable to the Project as there are no Nuclear Facilities included in the proposed Project.

Stipulation 31 – 1001.31 Exhibit 31: Local Laws and Ordinances

During preparation of the Application, the Applicant will continue its consultation with the Towns of Greenwood and West Union in Steuben County regarding the local law requirements applicable to the construction, operation and maintenance of the Project, and to determine whether any potential request by the Applicant that the Board elect to not apply any such local requirements could be obviated by design changes to the proposed Project, or otherwise.

Exhibit 31 shall contain:

- (a) A list and copies of all local ordinances, laws, resolutions, regulations, standards and other requirements applicable to the construction and operation of the Project that are of a procedural nature for those towns within the Project Area. These local procedural requirements are supplanted by PSL Article 10 unless the Board expressly authorizes the exercise of the procedural requirement by the local municipality or agency.
- (b) A list and copies of all local procedural requirements required to be identified pursuant to section (a) of this stipulation for which the Applicant requests that the Board expressly authorize the exercise of the procedural requirement by the local municipality or agency, including a statement why such local exercise would be desirable or appropriate.
- (c) Identification of the local agency qualified by the Secretary of State that shall review and approve the building plans, inspect the construction work, and certify compliance with the New York State Uniform Fire Prevention and Building Code, the Energy Conservation Construction Code of New York State, and the substantive provisions of any applicable local electrical, plumbing or building code.
- (d) Identification and copies of all local ordinances, laws, resolutions, regulations, standards and other requirements applicable to the construction and operation of the Project that are of a substantive nature, together with a statement that the location of the facility as proposed conforms to all such local substantive requirements. Copies of zoning, flood plain and similar maps, tables and/or documents shall be included in the exhibit when such are referenced in such local substantive requirements. Pursuant to PSL §168(3)(e), the Board must find that the facility is designed to operate in compliance with these local substantive requirements, all of which shall be binding upon the applicant, unless the Board elects to not apply them by finding that, as applied to the proposed Project such are unreasonably burdensome in view of the existing technology or the needs of or costs to ratepayers whether located inside or outside of such municipality.
- (e) A list of all local substantive requirements required to be identified pursuant to subdivision (d) of this stipulation for which the Applicant requests that the Board elect to not apply them by finding that, as applied to the Project such are unreasonably burdensome in view of the existing technology or the needs of or costs to ratepayers whether located inside or outside of such municipality. For each local substantive requirement identified, a statement justifying the request shall be provided. The

statement of justification shall show with facts and analysis the degree of burden caused by the requirement, why the burden should not reasonably be borne by the Applicant, that the request cannot reasonably be obviated by design changes to the Project, the request is the minimum necessary, and the adverse impacts of granting the request are mitigated to the maximum extent practicable. The statement shall include a demonstration:

- (1) for requests grounded in the existing technology, that there are technological limitations (including governmentally imposed technological limitations) related to necessary Project component bulk, height, process or materials that make compliance by the Applicant technically impossible, impractical or otherwise unreasonable;
 - (2) for requests grounded in factors of costs or economics (likely involving economic modeling), that the costs to consumers associated with applying the local substantive requirement outweigh the benefits of applying such provision; and
 - (3) for requests grounded in the needs of consumers, that the needs of consumers for the Project outweigh the impacts on the community that would result from refusal to apply the local substantive requirement.
- (f) A list and copies of any local ordinances, laws, resolutions, regulations, standards and other requirements applicable to the interconnection to or use of water, sewer, telecommunication and steam lines in public rights of way that are of a procedural nature.
- (g) A list and copies of any local ordinances, laws, resolutions, regulations, standards and other requirements applicable to the interconnection to or use of water, sewer, telecommunication and steam lines in public rights of way that are of a substantive nature.
- (h) A list of all local procedural or substantive requirements required to be identified pursuant to subdivisions (f) and (g) of this stipulation for which the Applicant requests that the Board elect to not apply them by finding that, as applied to the proposed Project interconnections such are unreasonably burdensome in view of the existing technology or the needs of or costs to ratepayers whether located inside or outside of such municipality. For each local procedural or substantive requirement identified, a statement justifying the request shall be provided. The statement of justification shall show with facts and analysis the degree of burden caused by the requirement, why the burden should not reasonably be borne by the Applicant, that the request cannot reasonably be obviated by design changes to the proposed Project, the request is the minimum necessary, and the adverse impacts of granting the request are mitigated to the maximum extent practicable. The statement shall include a demonstration:
- (1) for requests grounded in the existing technology, that there are technological limitations (including governmentally imposed technological limitations) related to necessary Project component bulk, height, process or materials that make

compliance by the Applicant technically impossible, impractical or otherwise unreasonable;

- (2) for requests grounded in factors of costs or economics (likely involving economic modeling), that the costs to consumers associated with applying the local substantive requirement outweigh the benefits of applying such provision; and
 - (3) for requests grounded in the needs of consumers, that the needs of consumers for the Project outweigh the impacts on the community that would result from refusal to apply the local substantive requirement.
- (i) A summary table of all local substantive requirements required to be identified pursuant to subdivisions (d) and (g) of this stipulation in two columns listing the provisions in the first column and a discussion or other showing demonstrating the degree of compliance with the substantive provision in the second column.
 - (j) An identification of the zoning designation or classification of all lands constituting the site of the proposed Project and a statement of the language in the zoning ordinance or local law by which it is indicated that the proposed Project is a permitted use at the proposed site. If the language of the zoning ordinance or local law indicates that the proposed Project is a permitted use at the proposed site subject to the grant of a special exception, a statement of the criteria in the zoning ordinance or local law by which qualification for such a special exception is to be determined.

Stipulation 32 – 1001.32 Exhibit 32: State Laws and Regulations

During preparation of the Application, the Applicant shall consult with the state agencies and authorities whose requirements are the subject of the exhibit to determine whether the Applicant has correctly identified all such requirements.

Exhibit 32 shall contain:

- (a) A list of all state approvals, consents, permits, certificates, or other conditions for the construction or operation of the proposed Project (including interconnection electric transmission lines and fuel gas transmission lines that are not subject to review under Article VII of the PSL) of a procedural nature. These state procedural requirements are supplanted by PSL Article 10, except for permits to be issued by the DEC pursuant to federal recognition of state authority, or pursuant to federally delegated or approved authority, in accordance with the Clean Water Act, the Clean Air Act and the Resource Conservation and Recovery Act, and permits pursuant to Section 15-1503, Title 9 of Article 27, and Articles 17 and 19 of the ECL, unless the Siting Board expressly authorizes the exercise of such authority by the state agency. In addition to the Article 10 Application, the Applicant will apply to the Public Service Commission for 1) a Certificate of Environmental Compatibility and Public Need to authorize construction of an approximately 16-mile 115 kV transmission line to connect the Project to the New York transmission grid through a parallel and separate Article VII and (2) a Certificate of Public Convenience and Necessity Pursuant to Section 68 of the PSL authorizing the exercise of municipal rights to occupy municipal property.
- (b) Additional explanation and justification for requesting that the Siting Board authorize DOT to issue the applicable over-sized vehicle permits and any other select procedural approvals or permits that the Applicant would require for the Project.
- (c) A list of all state approvals, consents, permits, certificates, or other conditions for the construction or operation of the proposed major electric generating facility (including interconnection electric transmission lines and fuel gas transmission lines that are not subject to review under Article VII of the PSL) of a substantive nature, together with a statement that the facility as proposed conforms to all such state substantive requirements. Pursuant to PSL §168(3) (e), the Board must find that the facility is designed to operate in compliance with these state substantive requirements, all of which shall be binding upon the applicant.
- (d) A summary table of all state substantive requirements.
- (e) A list of all state approvals, consents, permits, certificates, or other conditions for the construction or operation of any proposed offsite interconnections and ancillary features, if any.

Stipulation 33 – 1001.33 Exhibit 33: Other Applications and Filings

Exhibit 33 shall contain:

- (a) The Applicant will identify any applications or filings associated with participation in energy procurement markets, clean energy credit procurement, or similar markets. Additional detail on other applications or filings concerning the Project, such as required approvals from any federal agencies will be included.
- (b) A summary of any anticipated federal permits, consents, approvals, or licenses needed for the Project.

Stipulation 34 – 1001.34 Exhibit 34: Electric Interconnection

Exhibit 34 shall contain a detailed description of the proposed electric interconnection, to be built and owned by the Applicant on its side of the demarcation point, including:

- (a) The design voltage and voltage of initial operation.
- (b) The type, size, number and materials of conductors.
- (c) The insulator design.
- (d) The length of the transmission line.
- (e) The typical dimensions and construction materials of the towers.
- (f) The design standards for each type of tower and tower foundation.
- (g) For underground construction, the type of cable system to be used and the design standards for that system.
- (h) For underground construction, indicate on a profile of the line the depth of the cable and the location of any oil pumping stations and manholes.
- (i) Equipment to be installed in both the collection and point of interconnection substations and point of interconnection switchyard, including an explanation of the necessity of these components.
- (j) Any terminal facility.
- (k) The need for cathodic protection measures.

Stipulation 35 – 1001.35 Exhibit 35: Electric and Magnetic Fields

Exhibit 35 shall contain:

- (a) For the entire transmission corridor of the proposed power line providing the onsite non-Article VII electrical interconnection between the proposed Project and the onsite interconnection to the existing electric transmission and distribution system, identify every transmission corridor segment having unique electric and magnetic field (“EMF”) characteristics due to structure types and average heights, corridor widths, and co-location of other transmission facilities in the corridor.
- (b) For each identified onsite transmission corridor segment, provide both “base case” and “proposed” cross-sections to scale showing:
 - (1) All overhead electric transmission, sub-transmission and distribution facilities, including the proposed Project showing structural details and dimensions and identifying phase spacing, phasing, and any other characteristics affecting EMF calculations.
 - (2) All underground electric transmission, sub-transmission and distribution facilities.
 - (3) All underground gas transmission facilities.
 - (4) All right-of-way boundaries.
 - (5) Structural details and dimensions for all structures (dimensions, phase spacing, phasing, and similar categories) and include a Station number identifying the location.
- (c) A set of the aerial photos/drawings enhanced by showing the exact location of each:
 - (1) Onsite transmission corridor segment.
 - (2) Cross-section.
 - (3) Nearest residence or occupied non-residential building in each identified right-of-way segment with a stated measurement of the distance between the edge of right-of-way and the nearest edge of the residence or building.
- (d) An EMF study with calculation tables and field strength graphs for each identified segment cross-section, as follows:
 - (1) The study must be signed and stamped/sealed by a licensed professional engineer registered and in good standing in the State of New York.
 - (2) Identify the specific computer software program used to model the facilities and make the calculations, and provide all supporting analysis and documents for the calculation.

- (3) Regarding the electric fields, model the circuits at rated voltage and provide electric field calculation tables and field strength graphs calculated at one meter above ground level with 5 foot measurement intervals extending to the property boundary of the facility, including digital copies of all input assumptions and outputs for the calculations.
 - (4) Regarding magnetic fields, model the circuit phase currents equal to the summer-normal and winter-normal, loading conditions and provide magnetic field calculation tables and field strength graphs calculated at one meter above ground level with 5 foot measurement intervals extending to the property boundary of the facility, including digital copies of all input assumptions and outputs for the calculations.
 - (5) Regarding the magnetic fields, also model the circuit phase currents equal to the maximum average annual load estimated to be occurring on the power lines within ten years after the proposed Project is put in operation and provide magnetic field calculation tables and field strength graphs calculated at one meter above ground level with 5 foot measurement intervals depicting the width of the entire right-of-way and out to 500 feet from the edge of the right-of-way on both sides, including digital copies of all input assumptions and outputs for the calculation.
 - (6) Regarding the magnetic fields, also model a “base case” with the circuit phase currents equal to the maximum average annual load currently estimated to be occurring on the existing power lines within the right-of-way (without construction of operation of the proposed Project) and provide magnetic field calculation tables and field strength graphs calculated at one meter above ground level with 5 foot measurement intervals depicting the width of the entire right-of-way and out to 500 feet from the edge of the right-of-way on both sides, including digital copies of all input assumptions and outputs for the calculations.
- (e) Analysis of potential cumulative electric and magnetic field impacts within the Study Area. As used in this Stipulation 35, cumulative impacts are any significant electric and magnetic field impacts that result from the incremental or increased impacts of the Project when the impacts of the Project are added to the impacts of (1) the approximately 16-mile overhead 115 kV transmission line and related facilities to be constructed to connect the Project to the New York transmission grid that will be evaluated and certificated through a parallel and separate Article VII process, (2) general elements of the Canisteo Wind Energy Center within the Study Area, or (3) other existing wind turbines and related facilities within the Study Area (“Study Area” being within a 5-mile radius from all Project components; “proposed wind turbines” being wind turbines that are part of a project for which an application under Article 10 of the PSL has been submitted to the Siting Board as of the date of submission of the Application for the Project).

Stipulation 36 – 1001.36 Exhibit 36: Gas Interconnection

This requirement is not applicable to the Project as there are no Gas Interconnections included in the proposed Project.

Stipulation 37 – 1001.37 Exhibit 37: Back-Up Fuel

Back-up fuel is not generally applicable to the Project.

The only place that back-up fuel may be needed would be for emergency generators at the substation and/or the O&M building (TBD). Emergency generators would be fueled by propane stored in approved above-ground tanks. If propane back-up fuel storage is needed, it will be included in site plans and facility design descriptions; and assessment and conformance with requirements of NYS Fire Safety and Building Codes will be demonstrated.

Stipulation 38 – 1001.38 Exhibit 38: Water Interconnection

Applicant will identify potential and likely sources of water supply for both Project construction (*e.g.*, batch plant, fugitive dust control) and operations (*e.g.*, O&M building) in the Application.

Stipulation 39 – 1001.39 Exhibit 39: Wastewater Interconnection

There are no wastewater interconnections required for the proposed Project.

The Application will, however, describe how any wastewater generated during construction and operation will be properly disposed of, including the layout and design of any on-site septic system for the O&M building if one should be required.

Stipulation 40 – 1001.40 Exhibit 40: Telecommunications Interconnection

Exhibit 40 shall contain:

- (a) A description of how Project operational/generating data will be transmitted to the NYISO.
- (b) An identification of communications methods proposed for the O&M facility communication with the proposed generating facilities; with the interconnected utility system owners and operators; with any regional or national control center or system monitor and with the public, including emergency responders.
- (c) Details of any telecommunications system improvements (including off-site facilities extending outside of the Project Area) that may be required for operation of the interconnection system.

Stipulation 41 – 1001.41 Exhibit 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.

Attachment A Proposed Map Scales and Sizes

Attachment A – Proposed Map Scales and Sizes

Eight Point Wind Farm, Case 16-F-0062

Preliminarily Proposed Map Sizes and Scales for Article 10 Application

Exhibit	Title	Format	Extents	Acres of Extents	Scale (mi/in)	Scale (ft/in)	Scale (in/in)	Size	# Sheets	16 NYCRR ref
3	Study Area	PDF	SA	145,700	2.6	13,750	165,000	A	TBD	1001.3(a)(5)
3	Layout	PDF	PA	15,300	0.38	2,000	24,000	B	TBD	1001.3(a)(1)&(4)
3	Towns	PDF	PA	15,300	1	5,280	63,360	B	TBD	1001.3(a)
3	School Districts	PDF	PA	15,300	1	5,280	63,360	B	TBD	1001.3(b)
3	Fire Districts	PDF	PA	15,300	1	5,280	63,360	B	TBD	1001.3(b)
3	Project Location	PDF	PA	15,300	1	5,280	63,360	B	TBD	1001.3(b)
4	Zoning Districts	N/A	N/A	N/A	N/A	N/A	N/A	N/A	TBD	1001.4(d)
4	Agricultural Districts	PDF	SA	15,300	1	5,280	63,360	B	TBD	1001.4(g)
4	Utility Infrastructure Map	PDF	SA	15,300	1	5,280	63,360	B	TBD	1001.4(h)
4	Land Ownership Map	PDF	PA	15,300	0.38	2,000	24,000	B	TBD	1001.4(c)
4	Aerial Photographs and Vegetation Clearing Map	PDF	SA	15,300	1	1,000	12,000	B	TBD	1001.4(m) & (n)
11	Site Plan for Batch Plant	PDF	TBD	TBD	0.02	100	1,200	TBD	TBD	1001.11(b)
11	Site Plan for Laydown Yard	PDF	TBD	TBD	0.02	100	1,200	TBD	TBD	1001.11(b)
11	Site Plan for O&M Building	PDF	TBD	TBD	0.02	100	1,200	TBD	TBD	1001.11(a)
11	Site Plan for POI Switchyard	PDF	TBD	TBD	0.02	100	1,200	TBD	TBD	1001.11(h)
11	Site Plan for Project Substation	PDF	TBD	TBD	0.02	100	1,200	TBD	TBD	1001.11(a)
11	Site Plan for Typical Wind Turbine Assembly Area	PDF	TBD	TBD	0.02	100	1,200	TBD	TBD	
11	Transmission Line Plan and Profile, Route Plan	PDF	TBD	TBD	0.038	200	2,400	B	TBD	
11	Site Plans	PDF	PA	15,300	0.02	100	1,200	D2	TBD	1001.11(a)
19	Noise contour map	PDF	PA	15,300	0.2	1,200	14,400	B	TBD	1001.19(a)
21	Slopes	PDF	PA	15,300	1	5,280	63,360	B	TBD	1001.21(a) & (b)
21	Soil Types	PDF	PA	15,300	0.38	2,000	24,000	B	TBD	21(a)(2) & (b)(1)
24	Viewshed map(s)	PDF	SA 10mi	TBD	0.38	2,000	24,000	B	TBD	1001.24(b)(1)
25	Public Roads	PDF	PA	15,300	1	5,280	63,360	B	TBD	1001.25(a) site plan
26	Microwave Paths	PDF	PA	TBD	2.6	13,750	165,000	A	TBD	Facilities near paths shown in greater detail

4	Land Use Map	PDF	PA	15,300	1	5,280	63,360	B	TBD	Ex. 4(a)
4	Proposed Land Uses	PDF	PA	15,300	1	5,280	63,360	B	TBD	Ex. 4(f)
4	Recreation and other uses	PDF	SA	15,300	1	5,280	63,360	B	TBD	Ex. 4(h)
9	Alternate sites	PDF	TBD	15,300	1	5,280	63,360	B	TBD	Ex. 9(a)
9	Alternate wind project layout(s)	PDF	TBD	15,300	1	5,280	63,360	B	TBD	Ex. 9(c)(4)
11	Overall Site Plan for all facilities layout	PDF	TBD	15300	0.2	100	1,200	D2	TBD	Ex. 11(a)
13	Real Property	PDF	PA	15,300	0.38	2,000	24,000	B	TBD	Ex. 13 (a) & (b)
18	Security site plan	PDF	TBD	TBD	0.02	100	1,200	TBD	TBD	Ex 18(a)(1) & (4); (b)(1) & (5)
21	Geology & Soils	PDF	PA	15,300	0.38	2,000	24,000	B	TBD	Ex. 21(b)
23	Water Resources - Groundwater	PDF	PA	15,300	1	5,280	63,360	B	TBD	Ex. 23(a)(2)
23	Water Resources - Surface waters	PDF	PA	15,300	1	5,280	63,360	B	TBD	Ex. 23(b)(1)
23	SWPPP (preliminary)	PDF	PA	15,300	0.02	100	1,200	D2	TBD	Ex. 23(c)(1) & (2)
25	Site plan access roads	PDF	TBD	15300	0.2	100	1,200	D2	TBD	Ex. 25(a)(2)
35	EMF and residences	PDF	TBD	15,300	0.2	1,200	14,400	B	TBD	Ex. 35(c)

Notes: PA = Project Area, SA= Study Area, Size A = 8.5"x11", Size B = 11"x17", Size C = 18"x24", Size D2= 22"x34", Size D=24"x36"

All maps will be delivered in PDF format with the Article 10 application, and shape files or CAD files can be supplied where requested.

All scales above are proposed based on preliminary analysis and may need to be adjusted based on actual data.

Attachment B

Shadow Flicker Methodology

Attachment B – Shadow Flicker Methodology

A Project-specific shadow flicker analysis will be conducted using the software package, WindPRO. The duration of shadow flicker will be calculated based on the following data inputs and assumptions:

- (a) Wind turbine coordinates
- (b) Dimensions of the proposed wind turbines
- (c) Discrete modeling points, i.e. sensitive receptors, including residences, hospitals, schools and other potential sensitive receptors. These locations will be consistent with the locations modeled for the noise impact analysis.
- (d) USGS digital elevation data
- (e) Monthly sunshine probability values for each month from January to December. These values will be obtained from a publicly available historical dataset from NOAA's National Centers for Environmental Information (formerly NCDC) for the closest representative station
- (f) Onsite meteorological data for determining annual operational hours per wind direction sector
- (g) Limit shadow flicker calculations to 1.25 miles (2,012 m) from each proposed wind turbine.
- (h) Shadow flicker durations will only be calculated only when the angle of the sun was at least 3° above the horizon.

A potential refinement to the analysis will include the addition of a mitigative screening analysis due to features such as structures or vegetation.

As part of the comprehensive report, a tabular summary of the modeling results for the discrete receptors will be included along with an aerial view figure depicting the colored shadow flicker isolines. The figure will provide shadow flicker results at the Project level and individual site areas.

The expected annual duration of shadow flicker will be evaluated with respect to 30 hours per year as when there is an absence of a regulatory limit, the predicted duration of shadow flicker is often put into context by comparing expected shadow flicker impacts at residences to this duration of shadow flicker.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed and delivered:

Eight Point Wind, LLC
As to all Stipulations identified above agree:

By: _____

New York State Department of Public Service
As to all Stipulations identified above agree:

By: _____

New York State Department of Environmental Conservation
As to all Stipulations identified above agree:

By: _____

New York State Department of Agriculture & Markets
As to all Stipulations identified above agree:

By: _____

New York State Department of Health
As to all Stipulations identified above agree:

By: _____

Town of Greenwood, New York
As to all Stipulations identified above agree:

By: _____

Town of West Union, New York
As to all Stipulations identified above agree:

By: _____