PRELIMINARY SCOPING STATEMENT

Bear Ridge Solar Project, LLC

Case 18-F-0338

Towns of Cambria and Pendleton, Niagara County, New York

Prepared For:

CYPRESS CREEK RENEWABLES

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COMMONLY USED ACRONYMS AND ABBREVIATIONS

Applicant	Bear Ridge Solar, LLC
AC/DC	alternating current/direct current
BBA	Breeding Bird Atlas (New York State)
BMP	best management practice
CCR	Cypress Creek Renewables
CEF	Clean Energy Fund
CES	Clean Energy Standard
DMM	Document and Matter Management system
GHG	greenhouse gas
GIS	geographic information system
kW/kWh	kilowatt/kilowatt hour
kV	kilovolt
MW/MWh	megawatt/megawatt hour
NYNHP	New York Natural Heritage Program
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
NYCRR	New York Codes, Rules, and Regulations
NYISO	New York Independent System Operator
NYSDAM	New York State Department of Agriculture and Markets
NYSDEC	New York State Department of Environmental Conservation
NYSDPS	New York State Department of Public Service
NYSERDA	New York State Energy Research and Development Authority
NYSOPRHP	New York State Office of Parks, Recreation, and Historic Preservation
NYSORPS	New York Office of Real Property Services
O&M	Operations and Maintenance
OSHA	Occupational Safety and Health Administration
PILOT	payment in lieu of taxes
PIP	Public Involvement Program
POI	point of interconnection
PSL	Public Service Law
PSS	Preliminary Scoping Statement
Siting Board	New York State Board on Electric Generation Siting and the Environment
SPCC	Spill Prevention, Control, and Countermeasure
SPDES	State Pollutant Discharge Elimination System
SWPPP	Stormwater Pollution Prevention Plan
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VIA	Visual Impact Assessment

1.0 INTRODUCTION

Bear Ridge Solar, LLC (Bear Ridge Solar or the Applicant), a subsidiary of Cypress Creek Renewables, LLC (CCR) is proposing to submit an Application to construct a major electric generating facility (the Bear Ridge Solar Project or the Facility) under Article 10 of the Public Service Law (PSL). Pursuant to the rules of the New York State Board on Electric Generation Siting and the Environment (Siting Board), not less than 90 days before the date on which an applicant files an Application to construct a major electric generating facility under Article 10, the applicant must submit a Preliminary Scoping Statement (PSS). In addition, under 16 NYCRR § 1000.5(c), an applicant can file a PSS with the Siting Board no earlier than 150 days following the submission of a Public Involvement Program (PIP) Plan. The initial PIP for the Facility was filed on June 5, 2018 and after receipt of comments from the New York State Department of Public Service (DPS) staff, a Final PIP was filed on August 6, 2018. This PSS for the Bear Ridge Solar Project is intended to satisfy the filing requirements set forth by 16 NYCRR § 1000.5(c). Pursuant to 16 NYCRR 1000.5(g), within 21 days after the filing of this PSS, any person, agency, or municipality may submit comments on this PSS by serving such comments on the Applicant and filing a copy with the Secretary to the Siting Board. Further details for filing comments on this PSS are provided in the Notice, included in Appendix A of this PSS.

1.1 FACILITY DESCRIPTION

The Bear Ridge Solar Project is a proposed photovoltaic (PV) solar energy generating project located within the Towns of Cambria and Pendleton, Niagara County, New York. The Facility will generate up to 100 megawatts (MW) of renewable electricity and will represent one of the largest utility-scale solar power plants in New York State. The regional Facility location and preliminary Facility Site are depicted on Figures 1 and 2 respectively. The lands being evaluated to host the Facility (the Facility Area) comprise approximately 2,600 acres. Not all the land included in this area will ultimately host Facility components. This provides flexibility during project development to accommodate landowner desires and to minimize and avoid impacts to wetlands, cultural resources, visual resources, wildlife habitat, and other sensitive resources. Facility components will ultimately be sited on leased private land within the Facility Area, approximately 750 acres of which are proposed in Cambria and 150 acres in Pendleton. This portion of the Facility Area where components are proposed is referred to as the Facility Site. The Applicant is leasing land from private landowners, primarily those working in the agricultural industry, which will provide a stable and predictable revenue stream that can offset the financial risk of growing crops and keep land within family ownership. These private landowners do intend to continue their agricultural operations elsewhere within the Towns. The final extent of the Facility Site and locations of Facility components will be identified in detail in the Article 10 Application. However, in accordance with 16 NYCRR § 1000.5(l)(1), a preliminary solar panel layout is depicted on Figure 3.

If approved, the proposed Facility will ultimately consist of the construction and operation of a commercial-scale solar power project, including:

- Rows of PV panels (arrays) producing direct current (DC) electricity mounted on single-axis tracking structures (not exceeding 12 feet in height) that will follow the sun throughout the day;
- Inverters placed within the Facility (internal to the panel arrays) to convert DC electricity to alternating current (AC) electricity;
- A medium voltage collection system that will aggregate the AC output from the inverters;
- A substation where the Facility's electrical output voltage will be combined, and its voltage increased to the transmission line voltage of 115 kV via step-up transformers;
- A generation tie line (gen-tie) that will connect the Facility to the designated point of interconnection (POI);
- A switching station to be specified by Niagara Mohawk Power Corporation (d/b/a National Grid), where the electricity will be injected into the existing bulk transmission system and delivered to homes and businesses;
- Internal infrastructure including access roads and security fencing; and
- Temporary laydown areas for equipment staging during construction.

In addition, an on-site operations and maintenance (O&M) facility may be necessary for the Facility, and the Applicant plans to explore purchasing or leasing an existing structure within the Facility Site for that purpose. If a suitable existing structure cannot be identified, then the Applicant will consider constructing a new O&M facility. It is assumed that the O&M facility would be a 3,000 to 4,500 square-foot building, on a fenced site 3 to 5 acres in size, located adjacent to or near the substation. Additional details of the O&M facility, including location, will be identified and described in the Article 10 Application.

To deliver power to the New York State power grid, the Applicant proposes to interconnect with the existing Mountain to Lockport 115-kV transmission line, which is owned and operated by National Grid. Existing above ground transmission lines traverse the northern portion of the proposed Facility Site in an east-west orientation.

Bear Ridge Solar will have a nameplate capacity of 100 MW and is expected to generate approximately 200,000 MWh of energy for year one of operation. This will be enough electricity to meet the average annual consumption of over 25,000 households, based on average annual electric consumption of approximately 6,500 kWh per year, per household[1]. Solar energy is most beneficial during the summer demand to meet air conditioning loads. Because solar

[1] Energy Information Administration (EIA). 2009. Household Energy Use in New York. Accessed at: https://www.eia.gov/consumption/residential/reports/2009/state_briefs/pdf/NY.pdf.

electricity generation uses no fuel, it offsets additional air pollution from burning fossil fuels and reduces the cost of power during this time of peak conventional power demand.

1.2 FACILITY BENEFITS

New York has adopted strongly proactive policies to combat climate change and modernize the electric system to improve the efficiency, affordability, resiliency, and sustainability of the system most notably reflected in the 2015 State Energy Plan (SEP), issued June 25, 2015, by the New York State Energy Planning Board. The SEP recognizes the importance of ensuring that New York's power system is modern, clean, and diverse and that "renewable resources will . . . play a significant role in shaping New York's energy future, providing resilient power, reducing fuel cost volatility, and lowering [Greenhouse Gas (GHG)] emissions." The SEP describes the State's energy future through a series of goals such as a 40% reduction in GHG emissions from 1990 levels and procurement of 100% of electricity generation from renewable energy sources by 2040.[2]

On August 1, 2016, in accordance with the statutory obligation that agency actions must be reasonably consistent with the most recent SEP, the Public Service Commission approved the Clean Energy Standard (CES), which formally adopts the SEP's goals that 100% of New York's electricity is to be generated through renewable sources by 2040. This goal is part of a strategy to reduce statewide greenhouse gas emissions by 40% by 2030, with a 600 trillion Btu increase in statewide energy efficiency. The SEP seeks to animate clean energy markets, improve reliability and resiliency, encourage private investment in distributed clean energy solutions, and transition to a clean energy economy.

The proposed Facility will improve fuel diversity within the State by increasing the amount of electricity produced by non-fuel dependent solar power. Consequently, there will be no adverse impact on fuel delivery constraints. Rather, by generating electricity without the need for fuel delivery and displacing facilities that rely on fuel for generation, it is expected that the Facility will contribute toward reducing the demand for fuel thereby alleviating fuel delivery constraints. The Article 10 Application will contain an analysis of the Facility's impact on fuel delivery constraints.

The goals contained in the SEP and CES program are ambitious and require grid-scale solar projects, like the Facility, to achieve targeted levels of new renewable generation. At an anticipated size of 100 MW, the Facility will contribute to the State's clean energy goals.

[2] By Executive Order, it is also a goal of the State of New York to reduce current greenhouse gas emissions from all sources within the State 80% below levels emitted in the year 1990 by the year 2050. Executive Order No. 24 (2009) [9 N.Y.C.R.R. 7.24; continued, Executive Order No. 2 (2011) 9 N.Y.C.R.R. 8.2].

Further, it is anticipated that the proposed Facility will have positive impacts on socioeconomics in the area through employment opportunities, specifically by generating temporary construction employment. Local construction employment will primarily benefit those in the construction trades, including equipment operators, truck drivers, laborers, and electricians. In addition, Facility operation will generate part-time employment and contracting service opportunities for electricians, operations managers, laborers and fencing contractors, and landscaping maintenance crews. The Facility will also result in increased revenues to county and local municipality tax bases, purchase of local supplies and goods, and lease revenue to participating landowners. The Applicant is committed to empowering strong and healthy communities and providing positive benefits to the localities the company serves and proposes a commitment by working together with local communities in advancing local projects and helping fulfill community needs, like playgrounds, ballfields, emergency services equipment, job training, and science, technology, engineering, and mathematics (STEM) programs.

Earlier in 2018, the Applicant formed a dedicated Community Engagement team to emphasize its commitment to developing valuable clean energy projects that not only support the CES, but also provide meaningful benefits to the communities they serve. As a component of this effort, the Applicant intends to develop a "Community Value Proposition," of which includes a Payment-in-Lieu-of Tax (PILOT) agreement, a Community Benefits Agreement (CBA), a commitment to the project as a "Pollinator-Friendly Solar Energy System," and other activities that will directly provide additional benefits to the host municipalities and the overall region. Examples of activities within previous "Community Value Propositions" the Applicant has proposed with its 30 permitted community solar projects in New York State include:

- A partnership with the Hudson Valley Community College Workforce Development Institute to reduce course fees in solar job training, with a focus on recruiting veterans, women, and underrepresented communities into the solar industry.
- A three-year, $100,000 research partnership with Cornell's College of Agriculture and Life Sciences to determine the ecological and economic benefits of planting pollinator-friendly wildflowers and habitat on solar farms in New York.
- $22,500 to Greenville Central School District for the funding of STEM education and building efficiency upgrades.
- $50,000 for Genesee County's "STEM to STAMP" initiative in support of STEM education and workforce development.
- $15,000 to Dover Union Free School District in support of STEM education initiatives.

1.3 SUMMARY OF PRE-APPLICATION ACTIVITIES

Prior to this PSS, the Applicant prepared a PIP plan in accordance with 16 NYCRR § 1000.4, which was filed with the Siting Board, and the Project was assigned a case number (Case No. 18-F-0338). The initial draft of the PIP was submitted to the Siting Board on June 5, 2018, comments on the PIP were received from the NYSDPS on July 5, 2018, and the PIP was first updated, finalized, and filed by the Applicant on August 6, 2018, and updated further and filed October 10, 2018. The PIP can be accessed, viewed, and downloaded on the online case record maintained by the Siting Board on its Document Matter Management Website: (http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=18-F-0338&submit=Search) and on the Facility-specific website maintained by the Applicant (https://www.bearridgesolar.com). The Applicant has also established a toll-free number for Bear Ridge Solar (1-800-385-1802).

According to 16 NYCRR § 1000.4(c), a PIP must include: (1) consultation with the affected agencies and other stakeholders; (2) pre-application activities to encourage stakeholders to participate at the earliest opportunity; (3) activities designed to educate the public as to the specific proposal and the Article 10 review process, including the availability of funding for municipal and local parties; (4) the establishment of a website to disseminate information to the public; (5) notifications; and (6) activities designed to encourage participation by stakeholders in the certification and compliance process. It is anticipated that this will be an ongoing, evolving process throughout all phases of the Article 10 review process (pre-application phase, application phase, hearing and decision phase, and post-certification phase) intended to disseminate information regarding the Facility to stakeholders, solicit information from those stakeholders during public outreach events and generally foster participation in the Article 10 review.

The Applicant has established the following contacts and document repositories that will be available through the duration of the Article 10 Process:

- Public Contact Information (for the public stakeholders to contact with questions, concerns, etc.):

Marisa Scavo
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3402 Pico Blvd.
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- Local Document Repositories:

Sanborn-Pekin Free Library
5884 West Street, POB 176
Sanborn, NY 14132
(716) 731-9933
http://www.sanbornpekinlibrary.com/

Lockport Public Library
23 East Avenue
Lockport, NY 14094
(716) 433-5935
https://lockportlibrary.org

Town of Pendleton Town Hall
6570 Campbell Boulevard
Lockport, NY, 14094
(716) 625-8833
http://pendletonny.us/

Town of Cambria Town Hall
4160 Upper Mountain Rd #1
Sanborn, NY 14132
(716) 433-7664
http://townofcambria.com/

In support of this PSS, the Applicant has consulted with the public, affected agencies and other stakeholders, as required by 16 NYCRR § 1000.5(b). All such consultations have been documented in a Meeting Log maintained by the Applicant, which will be updated and submitted to the Siting Board on a regular basis (also available on the case record website referenced above). The most recent Meeting Log is included with this PSS as Appendix B. The Applicant will continue to prepare and file a Facility-specific Meeting Log on a regular basis throughout the duration of the Article 10 review process. Additional details regarding PIP implementation and outreach to stakeholders is provided in Section 2.2 of this PSS.

1.4 POTENTIAL IMPACTS

The following information regarding potential impacts associated with solar powered electric generating facilities is provided in accordance with 16 NYCRR § 1000.5(l)(2)(ii):

Relative to conventional energy generation methods of a similar scale, solar facilities result in minimal impacts to the environment. Conventional electrical generation facilities such as coal and natural gas create atmospheric emissions which contribute to climate change and create negative consequences on public health[3]. The Facility will aid in decreasing dependency on fossil fuels and will contribute to a more sustainable and forward-thinking energy generating system in New York State.

Potentially positive impacts to the local community resulting from development of the Facility include significant long-term economic benefits to participating landowners, as well as to the Towns of Cambria and Pendleton, the local school

[3] Confalonieri, U., B. Menne, R. Akhtar ,et al. 2007. Human Health In Climate change 2007: *Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Inter-governmental Panel on Climate Change*, Cambridge, UK : Cambridge University Press .

districts, and Niagara County. When fully operational, the Facility will provide up to 100 MW of electric power generation with no emissions of pollutants or greenhouse gases to the atmosphere and without the need for the use of significant quantities of water. These potentially beneficial impacts will be assessed in the Article 10 Application through preparation of a socioeconomic study analyzing the potential positive economic benefits of the Facility's operation and construction. In addition, the positive environmental and health impacts associated with generating electricity from a renewable resource such as solar energy rather than other fuel sources will be addressed in the Article 10 Application based on a review of recent State policy determinations and assessments and a review of State energy planning objectives.

Over the last 5 years, nearly 1000 MW of solar capacity has been developed in New York State[4]. These projects have returned important insights and information regarding the potentially adverse environmental impacts to be assessed and studied related to the operation and construction of a solar generating facility. Despite the minimal impacts anticipated as a result of the construction and operation of the Facility, its construction and operation could result in certain unavoidable impacts to the environment.

Impacts from the construction and operation of solar generation are largely the result of the fact that utility-scale solar energy facilities require a large contiguous area for the collection and distribution of energy. The Applicant has sited the Facility in a rural agricultural region in effort to minimize the need for land clearing and typical construction processes, such as grading and soil compaction. The Applicant is also anticipating use of minimally intrusive PV panel mounting systems to minimize soil disturbance so that the land may be returned to agricultural use following the decommissioning of the Facility.

Construction of solar energy projects does not typically require significant soil disturbance. Solar panels will be installed on a low-profile racking system, which consists of small I-beam posts driven into the ground, without the need for excavation, concrete, or other foundations. Limited grading may be necessary in some areas. In those limited areas where soil disturbance is necessary, topsoil will be stripped and stockpiled for restoration purposes. Following construction, any disturbed areas will be restored with topsoil, and a cover of native grass species and pollinator-friendly vegetation will be established around the solar panels. In addition, during operation of the Facility, an integrated pest management (IPM) plan is anticipated to be employed to ensure the establishment of native species and pollinator habitat through the mechanical or chemical removal of existing vegetation. This management strategy occurs throughout the growing season and is most intensive during the first 2-3 years of pollinator habitat establishment. After this period, vegetation maintenance becomes more targeted. It should be noted that herbicidal treatment will only be

[4] NYSUN, 2017. NY-Sun Annual Performance Report Through December 31, 2017. Page 2. Accessible: https://www.nyserda.ny.gov/-/media/NYSun/.../2016-ny-sun-performance-report.pdf.

used when necessary to ensure establishment of desired native plant communities, and where maintenance of the Facility may require herbicidal treatment (e.g., within the substation fence). More information about vegetation management will be included in the Article 10 Application In addition, allowing the on-site soils to "rest" over the life of the Facility will result in an added benefit of restoring nutrients and productivity to the soils. Because construction of the Facility will require minimal soil disturbance, the land will remain available to revert to agricultural use following decommissioning of the Facility.

The siting of Facility components has been designed to minimize impacts to undisturbed habitat by utilizing agricultural lands and previously disturbed areas, while avoiding forest and shrubland communities to the greatest extent possible. The Facility is being designed to completely avoid or minimize the need for tree-clearing to the greatest extent practicable. However, construction-related impacts to vegetation may still include some cutting/clearing, removal of stumps and/or root systems, and increased exposure/disturbance of soil. While construction best management practices will be followed to avoid impacts to the maximum extent practicable, it is possible that these impacts could result in a loss of wildlife food and cover, potential increased soil erosion and sedimentation, a disruption of normal nutrient cycling, and the introduction or spread of invasive plant species. These potential impacts will be addressed in consultation with appropriate agencies (e.g., the New York State Department of Environmental Conservation [NYSDEC]) to assess potential impacts to wildlife and terrestrial habitats associated with the construction of the Facility (see Section 2.22 of the PSS for additional information).

The Applicant has already conducted wetland and stream delineations within the preliminary Facility Site to facilitate a project design that will avoid or minimize wetland impacts to the greatest extent practicable. However, during construction, temporary or permanent impacts to wetlands and surface waters may occur. The extent of these impacts will be assessed following preliminary design. In addition, the Applicant will study the potential conversion of wetland communities that may result from construction activities (e.g. forested to scrub-shrub), and soil disturbance from burial of the electrical 34.5 kV collector lines. It is also possible that indirect impacts to wetlands and surface waters may result from sedimentation and erosion caused by adjacent construction activities (e.g., removal of vegetation and soil disturbance).

Solar energy projects do not result in the visual impacts comparable to other large-scale energy projects that require tall structures, smokestacks, or generate plumes, such as wind energy projects and natural gas-fired power plants. Photovoltaic panels have a low-profile (the arrays used in this project will not exceed 12 ft in height) which limits their visibility and potential visual effect in terms of the distance from which the panels will be visible. However, the large areas required to achieve the necessary scale of electrical production for utility-scale solar projects can result in visual impacts for viewers located in areas immediately adjacent to the Facility. In addition, glare is frequently raised as a

possible concern for solar PV installations. PV panels are designed to absorb as much of the solar spectrum as possible to maximize efficiency. There is an inverse correlation between light absorption and reflection. Consequently, virtually all PV panels installed in recent years have at least one anti-reflective coating to minimize reflection and maximize absorption. Therefore, although frequently raised as a concern, PV panels do not typically produce glare. In addition, Bear Ridge Solar intends to use single-axis trackers, which direct the panels at the sun for optimal energy production. An added benefit of the use of trackers is that any glare, however small, that might be generated is reflected directly back at the sun, therefore minimizing any glare available to observers (see Section 2.24 of this PSS for additional information).

Similarly, solar projects do not produce noise that results in significant impacts or annoyance to neighboring residences, wildlife, or other sensitive receptors. The primary source of noise from the operation of solar projects will be inverter hum during the day when the solar arrays are generating electricity. However, this noise is generally inaudible at distances greater than 150 feet from the inverter, which are typically sited within the interior of a given solar project[5]. The Facility substation will also represent a new sound source in the study area. The step-up transformer will be the primary source of sound within the substation. It is the Applicant's intention to utilize an appropriate setting away from residential receptors can ensure that the substation does not result in significant noise impacts. In addition, noise will be generated during project construction and maintenance, primarily from vehicles and equipment operating along access routes and at work areas. However, these are temporary activities that will not typically generate sounds louder than routine noise sources such as farm equipment and vehicles passing on the road.

Additional information regarding potential environmental impacts that could result from construction or operation of the Facility is included in Section 2.0 below. Potential impacts to wetlands, wildlife, cultural (i.e., historic and archeological) resources, and visual impacts will be evaluated through project/site-specific studies that are described in this PSS, and the results of the studies will be provided in the Application.

With careful planning and design, many of the potential impacts associated with solar facilities can be completely avoided or minimized to be compatible with the surrounding areas. At this time, because the studies characterizing these impacts have not yet been completed, and/or the results of such studies are being used to support the preliminary layout and design of the Facility, many specific avoidance, minimization, and mitigation measures cannot be identified. However, the studies conducted in furtherance of the Article 10 Application (the scope and methodologies of which are detailed in this PSS), will identify measures taken by the Applicant to avoid potential impacts as well as minimization and mitigation measures that will reduce impacts to the extent practicable.

[5] Guldberg, P., Tech Environmental, "Study of Acoustic and EMF Levels from Solar Photovoltaic Projects", Prepared for the Massachusetts Clean Energy Center, Boston, Dec. 2012.

1.5 IMPACT AVOIDANCE MEASURES

Compliance with the Conditions of the Article 10 Certificate, and various federal regulations, as well as certain applicable local regulations governing the development, design, construction and operation of the proposed Facility, will serve to avoid and minimize adverse impacts. Despite the fact that a final Facility layout and design has not yet been completed, based on the historical information regarding typical impact avoidance, minimization and mitigation measures for solar-powered electric generation projects, the following information is provided in accordance with 16 NYCRR § 1000.5(l)(2)(v) and (vi):

Proper siting considerations for solar projects include avoidance of areas with significant aesthetic or scenic resources and selection of sites that are not used by the public for recreation. Siting a project in open fields minimizes the potential need for tree clearing and associated visual (an ecological) impacts, and the network of existing woodlots and hedgerows around agricultural fields serve to minimize project visibility from nearby areas. In addition, collocating electrical facilities (such as the substation) with existing electrical infrastructure minimizes visual impacts. The Facility has been sited in a relatively flat, open, agricultural area. It is anticipated the land within the Facility Site that will host the equipment will require relatively little work to prepare it for construction. The solar arrays will generally follow the existing topography of the land within the Facility Site and will be constructed on existing grades. Relatively little land will need to be cleared of vegetation. The solar fields have been designed to minimize the need to remove trees in the Facility Site, particularly those associated with wetlands or containing potential wildlife habitat. Specific methods to be used to remove trees and vegetation and perform minimal grading have not been determined but will be those standard for the commercial construction industry. Most of the land surface within each solar field, including almost all the area below the arrays themselves, will be planted with a robust, low-growing seed mix. CCR is specifically interested in fostering pollinator habitat within the Facility Site. In 2016, New York lost half of its managed pollinator populations, which are vital for the crop yield of pollinator-dependent crops worth $344 million to the State's agricultural industry[6]. Through planting and managing native, pollinator-friendly vegetation, storm water runoff can be reduced, and wild pollinator populations, such as bees and butterflies, can be restored and sustained[7]. The Facility will provide healthy habitat for insects urgently needed to support agriculture.

Construction activities and Facility engineering will be in compliance with applicable state and local building codes and federal Occupational Safety and Health Administration (OSHA) guidelines to protect the safety of workers and the public. The personal safety and health of our employees and partners, as well as the prevention of workplace injuries

[6] NYS Beekeeper Tech Team. 2017 NYS Beekeeper Tech Team report. (Cornell University, 2018).

[7] "Soil, Crop, & Storm Water Benefits of Solar Sites." Fresh Energy, 22 Mar. 2016. Web. https://freshenergy.org/tag/storm-water/.

and illnesses is paramount to Cypress Creek. Cypress Creek EPC, LLC has maintained a safety record that far exceeds other construction companies. All the Applicant's combined construction projects exceeded 3,500,000 labor-hours in 2017. During this period, the overall incident rate was marked at 0.38 RIR, seven times less than the construction industry average of 2.8 RIR. Federal and state permitting typically required by the United States Army Corps of Engineers (USACE) and/or the NYSDEC, and associated avoidance and minimization measures, will serve to protect water resources, along with implementation of a Stormwater Pollution Prevention Plan (SWPPP) in accordance with a state-approved State Pollutant Discharge Elimination System (SPDES) permit.

Coordination between the Applicant and state and federal agencies will ensure that natural resource impacts are avoided to the extent practicable and that minimization and mitigation programs are in place to monitor potential impacts and ensure effective mitigation is in place. Consultation with the necessary local, county, and state highway entities will assure that safety is maintained, and that congestion and damage to highways in the area is avoided or minimized. In addition, the final Facility layout will be in accordance with various siting criteria, guidelines, and design standards that serve to avoid or minimize adverse environmental impacts. These may include:

- Minimizing the number of stream and wetland crossings.
- Designing all electrical lines in a manner that minimizes any possibility of stray voltage.
- Siting PV panels in open field areas to minimize forest clearing and impacts to habitat.
- Construction procedures will follow Best Management Practices for sediment and erosion control.
- Designing, engineering, and constructing the Facility in compliance with various codes and industry standards to assure safety and reliability.
- Utilizing the New York State Department of Agriculture and Markets (NYSA&M) guidelines to minimize impacts on agricultural land and farming practices.

There are a variety of visual mitigation options that have been or could be applied to solar projects. For a given project, visual mitigation options are typically evaluated based on the existing visual character, aesthetic features, vegetation, and visual sensitivity of a given project setting. Appropriate setback distances should be determined based on the sensitivity of the adjacent uses. For instance, smaller setbacks may be appropriate for limited use county roads than for more highly used roadways. Larger setbacks may be appropriate for areas adjacent to residences or public recreational areas, but smaller setbacks would be acceptable in areas adjacent to agricultural, industrial, forest, or vacant land. Security fencing can result in a visual impact for solar projects sited in rural areas. It is important to understand that security fencing is required for solar projects for safety and security purposes. However, specific vernacular fence styles in selected locations can be considered if there are specific existing styles, materials, or designs that relate to existing features in the landscape of a given project area. In these cases, selection of fence styles is

typically based on precedent examples on adjacent properties or within the local community so that when installed the project would better blend into the existing visual setting. Visual screening can include planting of vegetation or use of other methods intended to block or soften views of the project. Common approaches to visual screening include:

- *Evergreen Hedges*: Use of vegetation for mitigation can include installing a screening hedge made up of evergreen trees and shrubs along roadways and/or selected portions of the exterior fence line of the project. This approach is effective and commonly implemented in urban and suburban settings, however, it may not be appropriate in some settings (such as relatively undeveloped agricultural areas) where the introduction of evergreen hedges would be inconsistent with the existing visual setting.
- *Native Shrubs and Plantings*: An alternative to evergreen hedges, which may not appear naturalized or appropriate in many settings, is use of native shrubs and plantings along road frontages and/or selected portions of the exterior fence line of a project. This approach does not typically result in plantings that completely screen views of the project, but instead serve to soften the overall visual effect of the project and can help to better integrate the project into the surrounding landscape. Plantings should be selected based on aesthetic properties, to match with existing vegetation in the project vicinity, and the ability to grow in the specific conditions of a project area. In addition to helping to blend the project into the surrounding landscape, use of native plant species will also provide environmental benefits to the local animal and insect communities.
- *Pollinator-Friendly Grasses and Wildflowers*: In many agricultural areas, installation of hedges or shrubs may not be in keeping with the existing visual setting, which is typically characterized by open fields backed by occasional hedgerows or woodlots. Trees, shrubs, or tall vegetation along roadsides are often atypical in these settings. An alternative form of vegetative screening that may be appropriate in these areas is use of tall native grasses and wildflowers along selected roadsides and other fence lines to soften the appearance of the project and better integrate the project into the landscape. Regionally appropriate plantings can also provide habitat for pollinator species when planted around the periphery of the site and/or in locations on site where mowing can be restricted during the summer months. Leaving the taller plants un-mowed during the summer provides benefits to pollinators, habitat to ground nesting/feeding birds and cover for small mammals, in addition to softening the appearance of the project. Following this approach, low growing/groundcover native species should be planted under the solar panels and between arrays.

Facility development, construction and operation will also include specific measures to mitigate potential impacts to specific resources, which could include the following types of measures:

- Developing and implementing various plans to minimize adverse impacts to air, soil, and water resources, including a dust control plan, sediment and erosion control plan, and Spill Prevention, Control, and Countermeasure (SPCC) plan.

- Employing an environmental monitor/inspector to ensure compliance with all certificate and permit conditions, including practices to be employed at sensitive areas such as stream and wetland crossings.
- Implementing an Invasive Species Control Plan.
- Developing and implementing a Complaint Resolution Plan to address local landowner concerns throughout Facility construction and operation.
- Preparing a historic resource mitigation program, if needed, to be developed in consultation with the NYSOPRHP.
- Preparing a compensatory wetland mitigation plan, if needed, to mitigate impacts to streams and wetlands.
- Entering into a PILOT agreement with the local taxing jurisdictions to provide a significant and predictable level of funding for the towns, County, and school districts.
- Developing an Operations and Maintenance Plan
- Developing a Health and Safety Plan
- Developing a Site Security Plan
- Developing an Emergency and Fire Response Plan with local first responders.
- Implementing a Decommissioning Plan.

It should be noted that the Applicant is a leading integrated solar and energy storage company with a proven track record of developing, financing, building, & operating energy facilities across the United States. Cypress Creek is one of the nation's largest dedicated providers of solar projects and has established an inherent focus on partnering with local communities, governments, and utilities to help advance national and local clean energy programs. Nationally, Cypress Creek has developed over 3.2 GW of electricity, including over 30 projects in the State of New York alone. The Company has projects operational or in development in 25 states, many in communities similar to Cambria and Pendleton.

1.6 ORGANIZATION OF THE PSS

To facilitate an understanding of the intended content and organization of the pending Article 10 Application, and to identify the proposed methodology or scope of the studies to be conducted in support of the Application, this PSS has been organized in accordance with 16 NYCRR § 1001 (Content of an Application). Specifically, all sub-sections of Section 2.0 (Content of the Application) of this PSS correspond directly to each Exhibit that will be included in the Application as set forth in 16 NYCRR § 1001 (e.g., Section 2.1 corresponds to 16 NYCRR § 1001.1, Section 2.2 corresponds to 16 NYCRR § 1001.2, etc.). As a result of this organization, Exhibits that are not necessarily applicable to the Facility have been included as individual PSS sections in order to maintain consistency with the organization of the regulations. However, Exhibits that are not applicable to this Facility (e.g., Wind Power Facilities, Natural Gas Power Facilities, Nuclear Facilities) have been identified in the corresponding PSS section as Not Applicable.

With respect to the remaining PSS requirements set forth at 16NYCRR § 1000.5(l), a content matrix is provided in Section 3.0 (Summary and Conclusions) of this PSS, which cross-references the requirements of 16 NYCRR § 1000.5(l) with sections of this PSS that provide the required information.

2.0 CONTENT OF APPLICATION

2.1 GENERAL REQUIREMENTS

(1) Applicant Information

The Applicant is Bear Ridge Solar, LLC (Bear Ridge Solar or the Applicant), an indirect subsidiary of Cypress Creek Renewables, LLC (CCR). CCR's business address is 3402 Pico Blvd, Santa Monica, CA 90405.

(2) Facility Website

The Project Website can be found at: www.bearridgesolar.com.

(3) Public Contact

The Project's public contacts are Marisa Scavo and Kevin Kohlstedt, Project Developers. Their contact information is:

Marisa Scavo and Kevin Kohlstedt

3402 Pico Blvd

Santa Monica, CA 90405

(716) 379-3805

bearridge@ccrenew.com

(4) Principal Officer

Bear Ridge Solar, LLC is a Delaware limited liability company. Its managing member is Cypress Creek Renewables, LLC. The principal officer is Matthew McGovern, CEO.

(5) Document Service

Comments or questions about the Facility should be directed to Marisa Scavo and Kevin Kohlstedt, Project Developers. Their contact information is:

Marisa Scavo and Kevin Kohlstedt

3402 Pico Blvd

Santa Monica, CA 90405

(716) 379-3805

bearridge@ccrenew.com

(6) Type of Business

Bear Ridge Solar, LLC is a Delaware limited liability company formed November 14, 2017. Further information regarding certificate of formation will be provided within the Article 10 Application.

(7) Documents of Formation

The Facility will be owned by Bear Ridge Solar, LLC (Bear Ridge Solar) and the certificate of formation for the owner, as well as information on parent entities will be included with the Article 10 Application.

2.2 OVERVIEW AND PUBLIC INVOLVEMENT

The proposed Facility is a utility-scale solar project located in Niagara County, New York. The proposed Facility's components will be located in the Towns of Cambria and Pendleton. The regional Facility location and preliminary Facility Site is depicted on Figures 1 and 2, respectively. The Facility will be located on leased private land that is rural in nature. The actual footprint of the proposed Facility components will encompass approximately 650 acres within the Facility Site and will enable farmers and landowners to return to farming operations or other current land uses following the Facility's decommissioning.

The initial draft of the Public Involvement Program (PIP) plan was submitted to the Siting Board on June 5, 2018; comments on the PIP were received from the Department of Public Service (NYSDPS) on July 5, 2018; and the PIP was updated, finalized and filed by the Applicant on August 6, 2018. A revised PIP was filed on October 10, 2018.

Bear Ridge Solar LLC values its relationships with local stakeholders. Before undertaking necessary approval processes for development of the Facility, public outreach to educate interested parties has been conducted. Through such public outreach activities, Bear Ridge Solar has introduced the Facility to the local community and other interested parties to evaluate and address stakeholder concerns, interests and recommendations.

The first goal of the PIP is to identify affected stakeholders and other interested parties. The PIP presented this information in Exhibit A – Master List of Stakeholders. Since the PIP's final submission, that master list has been updated based on the Applicant's consultations and meetings with stakeholders. An updated Master List of Stakeholders is presented in Appendix C of this PSS. The Applicant has initiated consultations, and the results and summary of these meetings/consultations are in the Meeting Log, which is presented in Appendix B of this PSS. The Meeting Log will continue to be updated and filed on the NYSDPS website through the entire PSS and Article 10 Application process.

To date, the Applicant has conducted two open-house style meetings on October 3 and 4, 2018 at Niagara Community College in Sanborn NY, and Cambria Fire Hall in Lockport, NY, respectively. Notice of the public meeting was mailed to approximately 2,300 stakeholders and residents and published in three local newspapers. The sessions were well attended, with approximately 55 individuals in attendance for meeting at Niagara Community College, and approximately 50 for the meeting at Cambria Fire Hall, not including the Bear Ridge Solar Project Team. Participants were able to view posters with information on topics of interest, such as environmental impact assessments; to view the preliminary location of the proposed project; to make written or oral comments at the session, or to receive instructions on filling comments on the DMM system in the future; and to provide their contact information for future outreach efforts. Attendees asked questions regarding their concerns of rezoning agricultural lands to industrial zones,

the potential of the Facility to visually change rural community character, and the desire to be involved in the Article 10 process.

Since the open house meetings were held, the Applicant presented findings from the open houses to the Cambria Town Board and the Pendleton Planning Board and has had several follow-up discussions with stakeholders who attended the event and who have submitted questions or concerns regarding the proposed Facility. Those meetings and discussions will be documented in the Bear Ridge Solar PIP Tracking Logs and filed on the DMM system as the project moves through the Article 10 Process.

In addition to the open house meetings, the Applicant has a Facility-specific website (www.bearridgesolar.com) as well as a toll-free phone number (716) 379-3805) to call with any questions or comments. The Applicant has provided paper copies of all documents presented at the open house at the following document repositories:

- Sanborn-Pekin Free Library; 5884 West Street, PO Box 176, Sanborn, NY 14132
  Phone: (716) 731-9933; Web: http://sanbornpekinlibrary.com/
- Lockport Public Library; 23 East Avenue, Lockport, NY 14094
  Phone: (716) 433-5935; Web: https://lockportlibrary.org
- Town of Pendleton Town Hall; 6570 Campbell Boulevard, Lockport, NY 14094
  Phone: (716) 625-8833; Web: http://pendletony.us
- Town of Cambria Town Hall; 4160 Upper Mountain Rd #1, Sanborn, NY 14221
  Phone: (716) 433-7664; Web: http://townofcambria.com/

Cypress Creek Renewables is currently looking for a local office space in Pendleton and/or Cambria, New York, approximately 1 mile from the Facility Site. The Applicant is prepared to meet with stakeholders at the Facility Site, at planned events, or at other mutually agreed upon locations. Contact information for the Project Developers is available on the Project's website (www.bearridgesolar.com) and in Section 2.01 of this PSS.

The Applicant will conduct a mailing all stakeholders just prior to the submission of the PSS to provide an update on the Facility and invite comments and remind the stakeholders of the comment period timeframe. The Applicant will continue to attend municipal meetings and anticipates holding two additional open house meetings prior to submitting the Article 10 Application. Finally, the Applicant will also attempt to identify additional community events in which it would participate. All outreach efforts will be tracked in the meeting logs.

Consistent with the requirements of 1001.2 of the Public Service Law, Exhibit 2 of the Application will contain the following information:

(a) Brief Description of the Proposed Facility

Exhibit 2(a) shall contain a brief description of the major components of the Facility, including all proposed PV panel locations and the footprint of all other Facility components. The Applicant agrees that the major components of the Facility, are to be described as follows:

- **Facility**: Proposed components will include: photovoltaic (PV) solar panels and their rack/support systems; direct current (DC) and communications cables connecting the panels to inverters; the inverters, with their support platforms, control electronics, and step-up transformers; the buried and/or overhead alternating current (AC) medium voltage collector circuits; fencing and gates around each array of panels; access roads; temporary laydown/construction support areas; medium voltage-to-transmission voltage substation with associated equipment and fenced areas; a short length of transmission voltage line connecting the substation to a substation containing switching gear, the substation, associated equipment, and fenced area; a short length of transmission voltage line, with possible support poles to connect to the existing transmission line; and a possible operations and maintenance (O&M) building with fenced and parking/storage areas as well as any other improvements subject to the Siting Board's jurisdiction.
- **Facility Site**: The portions of parcels proposed to host the Facility components that contain such components. A preliminary Facility Site is identified in this PSS, and the final Facility Site will be identified in the Application.
- **Facility Area**: Represents the broader area within which selected parcels will be developed with solar facilities. This provides flexibility during the Project development phase to minimize and avoid impacts to wetlands, cultural resources, visual resources, wildlife habitat, and other sensitive resources as needed. While the Facility Area encompasses approximately 2,600 acres, the Facility will ultimately be sited on leased private land within the Facility Area.

(b) Brief Summary of the Application Contents

Exhibit 2(b) shall include a detailed table that provides a summary of all applicable exhibits required under 16 NYCRR Part 1001 and will follow the organization of the Application's Table of Contents and will satisfy the requirements of Part 1001.2(b).

(c) Brief Description of the Public Involvement Program before Submission of Application

Exhibit 2(c) of the Article 10 Application will contain a brief description of the 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 (if any) as a result of the PIP and agency consultation. Specific components of the PIP plan conducted as of the date of Application filing will be described, including:

- Opportunities for public involvement;
- Development and use of stakeholder list, including host and adjacent landowners;
- Consultation with affected agencies and stakeholders;
- Reference to existing website and toll-free phone number established for the Facility;
- Local project office location and established office hours;
- Timeline for responding to public comments received through these communication portals;
- When public document repositories will be updated;
- Applicant's efforts relating to language access;
- Identification of any environmental justice areas;
- Use of document repositories;
- Factsheets on the Article 10 process and intervenor funding and other outreach materials;
- Use of meeting logs tracking PIP activities, significant questions and/or issues raised by the public and the applicant's response or follow-up action; and
- The PIP and all other submissions under Article 10 to remain available at the designated repositories and online (website) throughout the application review processes

(d) Brief Description of the Public Involvement Program after Submission of Application

The Applicant will continue to engage stakeholders following submission of the Article 10 Application. A summary of post-application PIP activities will be provided in Exhibit 2(d) of the Article 10 Application, and will include:

- An updated stakeholder list that will be appended to the Application, including host and adjacent landowners and stakeholders identified during implementation of the public involvement program.
- A discussion of how stakeholders have been identified and subsequently added to the list during the scoping, stipulations, and public involvement processes, and a description of 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 will 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.

- In addition to newspaper publication as required under 16 NYCRR 1000.7(a), the Applicant will publish notification about the project in at least one free local community newspaper circulated in the project and study areas, if available.
- The Applicant agrees to provide a brief description of the public involvement program to be conducted by the Applicant after the submission of the Application, such as hearings, notification of construction activities, complaint resolution procedures, and including the Complaint Resolution Plan to be implemented for Facility construction and operation following certification.

(e) Brief Overall Analysis

Exhibit 2(e) will include an overall analysis of the relevant and material facts from the Article 10 Application, together with the information and analysis from the studies conducted in support of the Article 10 Application, regarding the nature of the probable environmental impacts of the construction and operation of the Facility on:

- Ecology, air, ground and surface water, and wildlife and habitat
- Public health and safety
- Cultural, historic and recreational resources
- Transportation, communications, utilities and other infrastructure, as required by Article 10 regulations.

In addition, Exhibit 2(e) will summarize the facts in the Article 10 Application that will provide the Siting Board with the information needed to determine:

- That the Facility is a beneficial addition or substitution for electric generation capacity of the State,
- That the construction and operation of the Facility will serve the public interest;
- That the adverse environmental effects of the construction and operation of the Facility will be minimized or avoided to the maximum extent practicable;
- If the Facility results in or contributes to a significant and adverse disproportionate environmental impact in the community in which the Facility would be located, that the Applicant will avoid, offset or minimize impacts caused by the Facility upon the local community for the duration of certificate to the maximum extent practicable using verifiable measures; and
- That the Facility is designed to operate in compliance with applicable state and local laws and regulations, or in the alternative that such laws and regulations as applied to the Facility are unreasonably burdensome and therefore not applicable. Ultimately, this information will provide a basis for the Siting Board to make the required Findings on the proposed Facility and support a decision to grant the Certificate in accordance with PSL Section 168.

2.3 LOCATION OF FACILITIES

Exhibit 3 of the Application shall contain maps, drawings and explanations showing the location of the proposed Facility, including all interconnections, and any ancillary feature such as roads, which together comprise the proposed Major Electric Generating Facility, in relation to municipalities (county, city, town and village) and taxing jurisdictions associated with any part of the overall development proposal.

Consistent with the requirements of 1001.3 of the Public Service Law, Exhibit 3 will contain the following information:

(a) Topographic Maps

Exhibit 3(a) shall include mapping showing the location of the components of the major electric generation and interconnection facilities associated with the proposed Bear Ridge Solar Project. These components, collectively referred to as the "Facility", will be mapped on the "USGS Topo" topographic tile cache base map service, displayed at a scale of 1:24,000 or greater. This map service combines the most current data (Boundaries, Elevation, Geographic Names, Hydrography, Land Cover, Structures, Transportation, and other themes) that make up The National Map[8]. The National Map is a collaborative effort between the USGS and other Federal, State, and local partners to improve and deliver topographic information for the United States. The "USGS Topo" map service is designed to provide a seamless view of the data in a geographic information system (GIS) accessible format and depicts information consistent with the USGS 7.5-minute (1:24,000) quadrangle topographic maps at large scales[1].

(1) Proposed Major Electric Generating Facility Locations

The required maps will depict all Facility components that can be clearly depicted at the required scale. More detail regarding specific Facility components (e.g. fencing and similar details) will be provided as part of the site plan drawings, as descripted in Section 2.11 of this PSS. With respect to the substation, a separate map will be prepared (at an appropriate scale) to depict the collection substation, POI and associated voltage. With respect to alternatives, the mapping will depict those alternatives as defined in Exhibit 9 of the Application. With respect to the O&M building, any preliminary locations under consideration will be identified in the Application however, this location may change post-Certification.

As currently designed, it is not anticipated that any permanent storm water features of a significant nature (e.g., large detention basin) will be utilized during construction and operation of the Facility.

[8] USGS. 2018. The National Map. USGSTopo ArcGIS REST Services Directory. Available at: https://basemap.nationalmap.gov/arcgis/rest/services/USGSTopo/MapServer.

Although unlikely, to the extent any information is known at the time of the submission of the Article 10 Application regarding potential locations of permanent mitigation/offset sites for impacts to streams/wetlands or historic resources, such locations will be mapped.

(2) Interconnection Location

All Facility components, including the interconnection facilities, will be mapped as indicated in Section 3(a)(1), above.

(3) Location of Ancillary Features

It is anticipated that the only off-site ancillary features that could be required for the Facility would be temporary public road improvements, if needed. These features will be depicted on mapping/figures in the Article 10 Application.

(4) Location of Article VII Transmission Lines Not Subject to Article 10

The Facility does not include any components that are subject to Article VII of the PSL.

(5) Study Area

The Facility will be subject to a number of studies in support of the Application. The various studies undertaken in support of the Application will apply appropriate, resource-specific study areas, which will be described in this section of the Application along with a reference to the exhibit in which more information is provided.

(b) Municipal Boundary Maps

1001.3(b) will contain mapping/figures depicting the location of the proposed Facility with respect to village, town, county, and school district boundaries.

(c) Description of Proposed Facility Locations

1001.3(c) will contain a description of the locational relationship of the Facility to village, town, county, and school district boundaries will be described in the Article 10 Application.

Please note that with respect to siting various Facility components, existing disturbances will be utilized wherever practicable. For instance, in many locations, linear features of the Facility (e.g., access roads, collection lines) will be sited, in part, on agricultural farm roads. This will be further described in the Article 10 Application.

(d) Facility Shapefiles

The Article 10 Application will include Facility shapefiles and will show the proposed PV panel locations, access roads, collection lines, collection substation, POI substation, and construction staging/laydown areas.

However, the Applicant will be seeking confidential information protection for shapefiles for all Facility components and will submit the shapefiles under separate and confidential cover, seeking the requisite protection for this information pursuant to NY Public Officer's Law Section 87(2)(d) and 16 NYCRR 6-1.4.

2.4 LAND USE

The Application will evaluate the Facility's impact on land uses both within, and outside of, the Facility Site. As described in the PIP for Bear Ridge Solar, the Study Area consists of a 2-mile radius from (and including) all Facility components, which includes portions of the Towns of Cambria, Lockport, Pendleton, and Wheatfield, and the City of Lockport. Any potential impacts to land use resulting from Facility construction and operation will be evaluated within this 2-mile Study Area.

Land use within the Facility Site consists largely of abandoned and active agricultural land, with small forested tracts and hedgerows. Approximately 79% (868 acres) of the land within the Facility Site is actively farmed for corn and other dairy forage crops. An additional 11% (122 acres) consists of forestlands and 3% (32 acres) consists of developed land (residential homes, farm structures, and roads). Other land uses include successional shrublands and fields no longer in agricultural use. Several local, County, and State roads pass through the Facility Site and multiple residences and farmsteads occur along these routes (Figure 4).

The Application will provide more detail on current land uses within the Facility Site and evaluate how the Facility may impact such uses. In addition, the Application will describe other proposed land use and/or development within the Study Area.

With respect to agriculture, the Application will include a discussion of factors contributing to the conversion of farmland within a 2-mile radius of the Facility, and potential cumulative impacts of such conversion, as well as the types of land uses driving those conversions (e.g., renewable energy, suburban housing developments, commercial development, etc.). The Applicant intends to conduct interviews with landowners/farm operators within the Facility Site and review readily available historical data on trends in farmland use and acreage in Niagara County. The Application will also describe measures during both construction and operation of the Facility that will be implemented to avoid and minimize impacts to on-site soils and adjacent agricultural uses, consistent with the NYSDAM guidelines for solar projects[9], to the maximum extent practicable.

The Application will include an analysis of the proposed Project's consistency with state, regional, and local land use planning tools, such as Town and County comprehensive plans, and Statewide and regional plans. Specialized planning tools and uses, designated Scenic Areas of Statewide Significance and the New York State Open Space Plan and the Historic Preservation Plan will also be discussed. Relatedly, Exhibit 10 of the Application will specifically address the Project's consistency with energy plans and policies, including the 2015 State Energy Plan (SEP).

[9] NYSDAM. April 2018. *Guidelines for Agricultural Mitigation for Solar Energy Projects.* Accessed at: https://www.agriculture.ny.gov/ap/agservices/Solar_Energy_Guidelines.pdf.

The proposed Facility will result in significant, temporary changes to land use within the footprint of the project. This area will be occupied by Facility components, so current land use practices will temporarily change for the life of the Facility. The PV panels to be utilized for the Facility do not require excavation, or concrete foundations. Additionally, construction and operation of solar energy projects does not typically require extensive land clearing or significant soil disturbance, particularly when sited in relatively level agricultural areas. Following construction, any disturbed areas will be restored with topsoil, and a cover of native, pollinator friendly plant species will be established around the solar panels. In addition, lease agreements with land owners will provide a stable and predictable revenue stream for the life of the Facility.

Consistent with the requirements of 1001.4 of the Public Service Law, Exhibit 4 of the Application will contain the following information:

(a) Map of Existing Land Uses

The Applicant agrees to provide the information required by 1001.4(a), including maps of existing land use within the Study Area. Land use will be identified using the New York Office of Real Property Services (NYSORPS) 3-digit classification codes. A separate map of NYS-enrolled Agricultural Districts, conservation programs, and NYS 480-a forest management programs will be included.

(b) Transmission Facilities Map

1001.4(b) shall include map of existing overhead and underground major transmission facilities for electric, gas or telecommunications within the Study Area based on publicly available data, coordination with local utilities, data on natural gas and oil wells obtained from the NYSDEC and NYDPS to the extent that such information is made available to the Applicant. The map shall identify all crossings of existing utilities by proposed Facility components. Additionally, any gas lines or wells in the Study Area shall be identified on this map.

(c) Tax Parcel Map

1001.4(c) shall include: A map of all properties containing proposed electric generating facilities and other facilities, components or related facilities, and all properties adjoining such properties. Parcels and land use data will be obtained from Niagara County. This map(s) will show property lines, land use, tax parcel number; owner of record of each property and any publicly known proposed land use for any of these parcels.

(d) Zoning District Map

1001.4(d) shall include:

i. Map(s) depicting existing and proposed zoning districts within the Study Area, based on data obtained from local governments.

ii. A review of zoning regulations for each of the towns where Facility components would be located; a description of permitted and prohibited uses within each zone; and citations to zoning and other land use regulations, requirements, designations and classifications related to land use regulations.

(e) Comprehensive Plan

1001.4(e) shall include a review of the following Comprehensive Plans that have been adopted by the host municipalities:

- The Town of Cambria Comprehensive Plan, 1997.
- The Town of Pendleton Comprehensive Plan 2025, 2008.
- The Niagara Communities Comprehensive Plan 2030, 2009.

(f) Map of Proposed Land Uses

1001.4(f) shall include information about proposed land uses from discussions with local planning officials, open houses, the PIP implementation/PSS development process, and other sources. Any information gathered will be described and/or mapped in the Article 10 Application.

(g) Map of Specially Designated Areas

The Applicant agrees to provide the information required by 1001.4(g) where identified items are applicable. Maps showing designated coastal areas, inland waterways, special flood hazard areas, Local Waterfront Revitalization Program (LWRP) communities, and critical environmental areas within a 2–mile radius of the Facility will be included.

(h) Map of Recreational Areas and Other Sensitive Land Uses

The Applicant agrees to provide the information required by 1001.4(h). This section will also provide a summary of the nature of potential environmental impacts of Facility construction and operation, including how such land impacts have been avoided or, if unavoidable, minimized or mitigated. The Facility's Visual Impact Assessment (as will be presented in Exhibit 24) will identify visually sensitive resources, including recreational and other sensitive land uses that may be affected by potential visibility of the Facility. Any potential direct impact of the Facility on the identified resources will also be addressed.

(i) Compatibility of the Facility with Existing and Proposed Land Uses

1001.4(i) shall include:

i. An assessment of the compatibility of the Facility with existing, proposed and allowed land uses, and local and regional land use plans. In addition to the plans listed in 1001.4(e) (above), this assessment will include relevant State and County planning documents such as:

- The 2016 New York Open Space Plan (OSP);
- The New York State Historic Preservation Plan 2015-2020;
- The Statewide Comprehensive Outdoor Recreation Plan 2014-2019;
- The New York State Office of Parks, Recreation and Historic Preservation Sustainability Plan (April 22, 2009).
- One Region Forward: A New Way to Plan for Buffalo Niagara (2015)

ii. To the extent known by the Applicant, consideration of operational requirements and future development proposals for existing electric and gas transmission facilities will be discussed in the Application.

(j) Compatibility of Above-Ground Interconnection with Existing and Proposed Land Uses

An assessment of the compatibility of any aboveground interconnections with existing and proposed land uses and temporary disturbances associated with Facility construction within 300 feet of the interconnect lines will be included in the Application.

(k) Compatibility of Underground Interconnections with Existing and Proposed Land Uses

An assessment of the compatibility of any underground interconnections with existing and proposed land uses and temporary disturbances associated with Facility construction within 300 feet of the interconnect lines will be included in the Application.

(l) Conformance with the Coastal Zone Management Act

The Facility Area is not located within a designated coastal area or in direct proximity of a designated inland waterway. Therefore, conformance with the Coastal Zone Management Act is not applicable.

(m) Aerial Photographs

1001.4(m) shall include aerial photographs within the Study Area. This mapping will likely be prepared using 1-foot resolution natural color orthoimagery, from the New York Stats Digital Orthoimagery Program captured in 2017, or the most recent available at the time of the Article 10 Application. The aerial photograph mapping will be depicted at a scale that will allow the identification and discrimination of natural and cultural features.

(n) Aerial Photograph Overlays

1001.4(n) shall include a map of Facility components overlaid on aerial photographs, at a readable scale. Buffers around each Facility component will show the limits of clearing and disturbance required (e.g., 20-foot permanent width and 50-foot temporary width for access roads). The aerial photographs to be included in the map are described in section 1001.4(m).

(o) Source of Aerial Photographs

1001.4(o) shall include the source information for the aerial photographs provided in Sections 2.04(m) and 2.04(n), above.

(p) Community Character

The Applicant agrees to provide the information required by 1001.4(p). Sources of information used to describe community character will include local municipal master plans and the county master plans listed in 1001.4(e) (above), among other sources. A discussion of current use and agricultural productivity within the Facility Site will be included in the Application.

2.5 ELECTRIC SYSTEM EFFECTS

The Application will evaluate the effects of the Facility's interconnection on the reliability of the electric system. The Applicant proposes to electrically interconnect the Facility to the New York State Bulk Power System via a new POI Substation on National Grid's 115 kilovolt (kV) system (115 kV System). The Applicant commissioned a transmission injection study of the capacity of the electric grid in the region in 2016. The study evaluated several alternative options, estimating the maximum injection capability during various contingencies prior to the thermal limits of transmission lines and transformers in the area being exceeded. The results of the study suggested that interconnection a 100 MW solar project to the 115 kV System would be the most feasible alternative.

The Applicant filed an interconnection request with the NYSIO, operator of New York's transmission system, for interconnection of 100 MW into the National Grid Mountain-Lockport 115 kV transmission system. With National Grid's support a Feasibility Study and a System Reliability Impact Study (SRIS) have been completed for the Facility, and a Facility Study is underway. The Applicant anticipates entering into the NYISO 2022 Class Year for Facilities Studies. The Applicant will file the SRIS separately under confidential cover as NYISO requires the SRIS to remain confidential due to Critical Energy Infrastructure Information (CEI) Regulations.

Based on NYISO scope, the SRIS was performed for Summer Peak, Winter Peak and Light Load system conditions. The study system includes the Western Zone (A) in the New York ISO system. The Article 10 Application will describe the impact of the proposed Facility and interconnection on transmission system reliability in the State in detail.

The Facility and Facility Components will be designed in accordance with all applicable industry standards, codes, and guidelines. For portions owned by the Applicant (e.g., collection system, PV Panels, Underground/Aboveground Collection Line Systems, Collection Substation), best industry practices will be used, along with any standards/preferences set by the companies designing the Facility. For the POI substation, National Grid will design and construct the facilities per its technical standards and the results of the interconnection studies.

All material received for construction of the Facility Components will be visually inspected for defects and compatibility with the design/specifications. Various industry standard electrical and mechanical tests are performed on equipment before leaving the manufacturers' facilities.

Consistent with the requirements of 1001.5 of the Public Service Law, Exhibit 5 of the Application will contain the following information:

(a) System Reliability Impact Study

The Applicant agrees to provide the information required by 1001.5(a). The SRIS will be submitted and filed under separate confidential cover pursuant to Section 87(2)(d) of the New York State Public Officers Law and the Commission's regulations and 16 NYCRR 6-1.4.

(b) Potential Reliability Impacts

An analysis and/or statement of the impact of the proposed Facility on reliability in the state of New York as evaluated in the SRIS.

(c) Benefits and Detriments of the Facility on Ancillary Services

A discussion of the impacts of the Facility on ancillary services as evaluated in the SRIS.

(d) Reasonable Alternatives to Mitigate Adverse Reliability Impacts

A summary of reasonable alternatives that would mitigate adverse reliability impacts (if such impacts are found to be possible) as evaluated in the SRIS.

(e) Estimated Change in Total Transfer Capacity

An estimate of the increase or decrease in the total transfer capacity across each affected interface based on analysis in the SRIS, including an evaluation of reasonable corrective measures if transfer capabilities are affected and require mitigation.

(f) Criteria, Plans, and Protocols

The Applicant agrees to provide the information required by 1001.5(f), including a discussion of Facility maintenance and potential impacts which may arise during operation.

(g) Heat Balance Diagrams

Since there will be no thermal component to the Facility, this requirement is not applicable to the proposed Facility and will not be addressed in the Application.

(h) Interconnection Substation Transfer Information

The Applicant agrees to provide the following information required by 1001.5(h):

i. the substation facilities to be transferred and the contemplated future transaction, including a timetable for the future transfer;
ii. how the substation-interconnection design will meet the transmission owner's requirements; and

iii. the operational and maintenance responsibilities for the substation and how they will meet the transmission owner's standards.

(i) Facility Maintenance and Management Plans

The Applicant agrees to provide the information required by 1001.5(i), including Facility maintenance and management plans, procedures and criteria, specifically addressing the following topics:

(1) Electric transmission gathering and interconnect line inspections, maintenance, and repairs, including:

- Vegetation clearance requirements
- Vegetation management plans and procedures
- Inspection and maintenance schedules
- Notifications and public relations for work in public rights-of-way
- Minimization of interference with distribution systems

(j) Vegetation Management Practices for Substation Yards

Vegetation management practices for the POI Substation and Substation, and for danger trees (trees that due to location and condition are a particular threat to fall on and damage electrical equipment) around the Substation and POI Substation, specifications for clearances, inspection and treatment schedules, and environmental controls to avoid off-site effects.

(k) Criteria and Procedures for Sharing Facilities with Other Utilities

The Applicant agrees to provide the information required by 1001.5(k).

(l) Availability and Expected Delivery Dates for Major Components

The Applicant agrees to provide the information required by 1001.5(i). Including a status report on equipment availability and expected delivery dates for major components.

(m) Blackstart Capabilities

Solar facilities are not suitable for blackstart because there is no guarantee that the Facility will be generating electricity at a sufficient level at a given time. Therefore, the Application will not address blackstart capabilities.

(n) Identification and Demonstration of the Degree of Compliance

The information required by 1001.5(n) will be provided through the SRIS, the development of which included consultation with NYISO and the local transmission owner. In addition, 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 and affiliated system owners will be provided.

2.6 WIND POWER FACILITIES

The proposed Facility is not a wind power facility, and as such, the requirements of 1001.6 are not applicable and will not be included in the Article 10 Application.

2.7 NATURAL GAS POWER FACILITIES

The proposed Facility is not a natural gas power facility, and as such, the requirements of 1001.7 are not applicable and will not be included in the Article 10 Application.

2.8 ELECTRICAL SYSTEM PRODUCTION MODELING

The Article 10 Application will include the results of electrical system production modeling. The Applicant will consult with NYSDEC and NYSDPS following submission of this PSS to develop an acceptable input data set to be used in the simulation analyses, including modeling for the Applicant's proposed Facility and inputs for the emissions analysis. Portions of the data to be provided are proprietary and/or Critical Energy Infrastructure (CEI) and will be filed under a protective agreement. The Applicant will seek the requisite trade secret protection for this information pursuant to NY Public Officer's Law Section 87(2)(d) and 16 NYCRR 6-1.3 and 6-1.4.

The Application will include electrical system production modeling conducted for the 2022 year. An 8,760 hourly generation profile will be developed. Energy production will be forecasted, based on certain user inputs, utilizing the computer simulation program PVSyst, NREL's SAM, or a similar tool. Estimates of hourly production and scheduled hourly production will be provided in tabular and graphical formats in the Article 10 Application.

The gross average energy yield for each month will be determined from the generation profile with each monthly dataset adjusted to the monthly long-term, and gross energy distribution for the year will be determined. The net long-term energy yield for each month will be estimated by applying monthly specific loss assumptions to include availability and environmental factors. The monthly net capacity factor is calculated based on the number of days in each month, and overall annual net capacity factor from the sum of all monthly net energy yields and the total per year. Monthly energy yield averages will be determined from the observed solar production profile data in each specific month and long-term adjustments will be made to the monthly data set and included in the Application.

Based on the long-term adjusted average energy yield for each month, a gross monthly energy distribution for the year can be determined. Monthly specific loss assumptions for availability and environmental factors will be taken from the gross monthly production distribution to yield the 12 estimated monthly productions in MWh. An annual production output will be determined from the sum of all monthly net energy yields in MWh.

In addition, a Generation Dispatch Forecasting Analysis will be prepared based on the energy yield forecast for utility-scale solar. For the analysis, the NYISO 2022 system will be modeled to the extent that information is available, with and without the proposed Facility, and compared the generation dispatch of must run resources with the NYISO service territory between the two scenarios. This comparison will be performed using simulator software heavily utilized for market studies within the NYISO service territory. The first step in the analysis will be to complete a powerflow study to identify any critical constraints in the vicinity of the proposed Facility, followed by a generation and transmission nodal market study based on 8,760 hours-per-year simulation for the study year, while taking into consideration system constraints including critical constraints identified in the powerflow calculations. The analysis will simulate the effect of

energy schedules from energy resources on must run resources redispatching to reliably serve the grid and avoid curtailment.

Exhibit 8 of the Application will contain the information consistent with the requirements of 1001.8 of the Article 10 Regulations.

2.9 ALTERNATIVES

The Siting Board's regulations provide that an applicant need only identify and describe alternative sites owned by, or under option to, the applicant or its affiliates. Unlike state or municipal entities, private developers do not have the power of condemnation or eminent domain. Consequently, the Applicant does not have the unfettered ability to locate facilities in any area or on any parcel of land. Facility components can only be sited on private property where the landowner has agreed to allow the construction and operation of such components. In the Article 10 Application, Exhibit 9 will provide information regarding the general criteria used to evaluate the suitability of the site for the Facility. Ultimately, the Application will demonstrate that the proposed Facility Site is suitable for utility-scale solar energy generation, and why the selected location best serves the public interest and the environment.

The location selected for the Facility Site is a suitable area in New York for commercial scale solar energy production. Preliminary selection of solar energy center locations is driven by many essential operational factors, both technical and economical. Bear Ridge Solar LLC selected the proposed Facility Site based on availability of the solar resource, available land from willing landowners, the relative ease of accessing the Facility Site (thus limiting unnecessary impacts), the relative ease of connecting to the existing electric transmission grid, and sufficient available capacity of the grid. Additional factors considered in siting the Facility include compatible land use, topography, and avoidance of areas considered of high statewide significance or environmental sensitivity.

Consistent with the requirements of 1001.9 of the Article 10 regulations, Exhibit 9 of the Application will contain the following information:

(a) Identification and Description of the Facility Site

The Applicant will provide the specific information required by 1001.9(a). Given that the Applicant proposes to operate a private facility, the identification and description of applicable, reasonable and available alternative location sites for the proposed Facility, if any, will be limited to sites under option to the Applicant for the solar energy project, as authorized by 16 NYCRR § 1001.9(a).

(b) Evaluation of the Proposed Facility Site

For each applicable, reasonable, and available alternative location identified, if any, the Applicant will provide an evaluation of the comparative advantages and disadvantages of the proposed and alternative locations at a level of detail sufficient to permit a comparative assessment of the alternatives. The general site selection process and relevant information/analyses associated with the Facility will be provided in relation to Exhibit 9(b)(1) through (11).

(c) Alternative Layouts at the Proposed Facility

Unlike state or municipal entities, private developers do not have the power of condemnation or eminent domain. Consequently, the Applicant does not have the unfettered ability to locate facilities in any area or on any parcel of land. Facilities can only be sited on private property where the landowner has agreed to allow such construction. The Article 10 Application will describe the site selection process and appropriateness of the proposed site for the Facility including:

(1) General Arrangement and Design

The Facility design that will be presented in the Article 10 Application will result from multiple iterations and refinement to the initial layout in response to the results of regulatory considerations, on-site engineering, and environmental studies.

(2) PV module and energy storage technology appropriate to utility-scale facilities.

(3) Alternate scale, interconnection configuration and magnitude of the facilities in the context of the interconnection position (i.e., maximum generating capacity of 100 MW-AC) and information on the economic benefits to local communities related to Facility scale and magnitude.

(4) The proposed Facility is not a wind power facility, and as such, the requirements of 1001.9(c)(4) are not applicable. Notwithstanding this, the Applicant agrees to provide in the Application a discussion of alternative arrangements of Facility components within the Facility Site, including alternative layouts for PV solar modules and their rack/support systems

(5) In 2018, Bear Ridge Solar filed an application with the NYISO for interconnection of 100 MW-AC into the Mountain-Lockport 115-kV transmission line. The System Reliability Impact Studies are anticipated to be completed in 2019. Assuming nothing unexpected is found in these studies, approval by the NYISO Operating Committee would be expected to occur shortly thereafter.

(d) Why the Proposed Location Best Promotes Public Health and Welfare

The Applicant agrees to provide the statement required by 1001.9(d).

(e) Why the Proposed Facility Best Promotes Public Health and Welfare

The Applicant agrees to provide the information required by 1001.9(e).

(f) No Action Alternative

The Applicant agrees to provide the statement required by 1001.9(f), including a description and evaluation of the no action/no build alternative at the proposed Facility location, including the reason why the proposed Facility is better suited to promote public health and welfare, including recreational, cultural and other concurrent uses that the site may serve.

(g) Energy Supply Source Alternatives

The information required by 1001.9(g) is not applicable to the Facility.

(h) Source and Demand-Reducing Alternatives Comparison of Advantages and Disadvantages of Proposed and Alternative Energy Sources

Due to the nature of the Facility sponsor, a solar energy developer, source and demand-reducing alternatives will not be evaluated in the Application.

(i) Why the Proposed Project Best Promotes Public Health and Welfare

The Applicant agrees to provide the statement required by 1001.9(i).

2.10 CONSISTENCY WITH ENERGY PLANNING OBJECTIVES

New York has adopted strongly proactive policies to combat climate change, reduce harmful air pollution, and modernize the electric system to improve the efficiency, affordability, resiliency, and sustainability of the system, most notably reflected in the 2015 State Energy Plan ("SEP"), issued June 25, 2015, by the New York State Energy Planning Board. The SEP recognizes the importance of ensuring that New York's power system is modern, clean, and diverse and that "renewable resources will . . . play a significant role in shaping New York's energy future, providing resilient power, reducing fuel cost volatility, and lowering [Greenhouse Gas (GHG)] emissions." The SEP describes the State's energy future through a series of goals such as a 40% reduction in GHG emissions from 1990 levels, and procurement of 50% of electricity generation from renewable energy sources by 2030.

The goals set forth in the SEP are ambitious and will require utility-scale solar projects, such as the Facility, to achieve targeted levels of new renewable generation. In the Article 10 Application, Bear Ridge Solar will be required to demonstrate that the proposed Facility is consistent with New York State's energy planning objectives, including the most recent SEP. The Application will provide a statement demonstrating the Facility's degree of consistency with the State Energy Plan and these other important State policies and initiatives. Further, the Application will highlight how the Facility supports the five "Guiding Principles" identified in the SEP and will comment on how the Facility supports the seven goals listed in the "Initiatives and Goals" section of the Plan. The Application will also comment on how the Facility supports the New York 2030 targets in the SEP. While these discussions will focus on the proposed Facility's consistency with the SEP, and with the subsequently adopted Clean Energy Standard (CES), the Applicant will also touch upon some of the broader themes and challenges which motivated these State policies, and the ways in which the Applicant's unique proposal will advance broader societal goals such as sustainability, cooperative use and management of land and resources, reduction in harmful air pollution, and scientific research and advancement.

The proposed Facility should improve fuel diversity within the State by increasing the amount of electricity produced by non-fossil fuel dependent solar power. In 2008, the NYISO found that New York's electric utility system relies on supply from numerous fuel sources, including coal, water, wind, nuclear and natural gas, as well as interconnections with neighboring states and demand-response resources. According to the NYISO, "[m]aintaining and improving fuel diversity in New York will lead to less volatile electric prices, improved reliability, and positive environmental impacts." [10] Since 2000, private power producers and public power authorities have added more than 11,655 megawatts of new generating capacity in New York State. This additional generation represents approximately 30 percent of New York's current generating capacity. Over 80 percent of that new generation is located in the eastern and southern regions of

[10] NYISO: Fuel Diversity in the New York Electric Market, A NYISO White Paper (2008), available at: http://www.nyiso.com/public/webdocs/media_room/publications_presentations/White_Papers/White_Papers/fuel_diversity_11202008.pdf.

New York (Zones F-K) -- where power demand is greatest. Other additions to New York's power-producing resources resulted from upgrades to existing power plants in upstate regions, or were largely influenced by physical factors, such as the suitability of wind conditions in the northern and western regions of the state, and with respect to solar, availability of sufficient land to site grid-scale projects. In the Article 10 Application, the Applicant will describe in detail how the Facility impacts regional electricity and capacity demands given taking into consideration also the need for additional renewable generation and locational constraints.

Exhibit 10 of the Application will contain the information consistent with the requirements of 1001.10 of the Article 10 Regulations, including reference to the 2015 State Energy Plan and an explanation on consistency with the recently adopted New York State Clean Energy Standard.

(a) Consistency with State Energy Plan

The Article 10 Application will further explain how the Facility advances the objectives of the State Energy Plan and the CES and assists the State in achieving the renewable energy generation objectives.

(b) Impact on Reliability

A SRIS has been completed for the Facility on behalf of the NYISO as of 2019, and the results will be presented in Exhibits 5 and 8 of the Article 10 Application, with certain issues such as reliability addressed in greater detail in Exhibit 10. The objectives of the SRIS are to: (1) confirm that the proposed new or modified facilities associated with the project comply with applicable reliability standards, (2) assess the impact of the proposed Facility on the reliability of the pre-existing power system, (3) evaluate alternatives to eliminate adverse reliability impacts, if any, resulting from the proposed interconnection, and (4) assess the impact of the proposed project on transmission transfer limits, considering thermal, voltage and stability limitations, and estimate the increase or decrease in the Transfer Capability of affected transmission interfaces. The scope and methodology of the SRIS is set by the NYISO and is uniform across projects of this nature. A number of power flow base cases will be evaluated both with and without the proposed Facility in service, including 2018 summer peak, winter peak, and light load.

The Article 10 Application will contain an analysis of the impact of the proposed Facility on electrical system reliability based on the results of the SRIS and subsequent studies/analyses conducted by/with the NYISO. The SRIS will be submitted with the Article 10 Application under confidential cover.

(c) Impact on Fuel Diversity

The Article 10 Application will include discussion of the current electric generation capacity by fuel type to demonstrate that the addition of the Facility will contribute to fuel diversity.

(d) Impact on Regional Requirements for Capacity

The Article 10 Application will describe in detail how the Facility impacts regional electricity and capacity demands given taking into consideration also the need for additional renewable generation and locational constraints.

(e) Impact on Electric Transmission Constraints

The Article 10 Application will discuss Facility impacts on electric transmission constraints, based on the New York State Transmission Assessment and Reliability Study and other NYISO reports/data.

(f) Impact on Fuel Delivery Constraints

The proposed Facility will generate electricity without the use of fuel. Consequently, there will be no adverse impact on fuel delivery constraints. Rather, by generating electricity without the need for fuel delivery and displacing facilities that rely on fuel for generation, it is expected that the Facility will contribute toward reducing the demand for fuel thereby alleviating fuel delivery constraints and emissions related to coal and gas exploration, mining, refining and transportation. The Article 10 Application will contain an analysis of the Facility's impact on fuel delivery constraints.

(g) Impact on Energy Policy

The need for additional renewable generation and a decreased reliance on fossil-fueled energy generation has been a mainstay of New York Energy policy for almost two decades. Recent policy initiatives also include a comprehensive Clean Energy Standard, a critical part of New York State's Reforming the Energy Vision initiative which is designed to support clean energy market development and innovation and to encourage the development of large-scale renewable energy resources as part of New York's clean energy future. Large-scale renewables, which are larger utility-scale renewable energy project developments, such as the Facility, are a key component of REV and the CES. In fact, REV recognizes that largescale renewables, which require more capital and take more planning than other facilities, will be critically important to meeting greenhouse gas emissions reduction goals. The proposed Facility's consistency with and furtherance of these goals will be discussed in detail in the Article 10 Application.

(h) Comparison of Advantages and Disadvantages of Proposed and Alternative Locations

Given the unique nature and constraints associated with the siting of solar-powered electric generation facilities (i.e. level, affordable, naturally screened unutilized land, landowners willing to enter into agreements with the Applicant, and adequate access to the bulk power transmission system), a full comparison between the proposed Facility Location and alternative locations will not be contained in the Application. Instead, the Article 10 Application will focus on comparing alternative facility configurations (layout, interconnection, potential use of storage, DC/AC ratio and row spacing, type of PV module etc.) within the proposed Facility Area. Such alternatives may include alternative project layouts and/or alternative project size and a no action alternative and as identified in Section 2.9.

(i) Why the Proposed Location and Source Best Promotes Public Health and Welfare

The Applicant agrees to provide the statement required by 1001.10(j).

2.11 PRELIMINARY DESIGN DRAWINGS

Preliminary Design Drawings will be prepared in support of the Article 10 Application. The drawings will depict the location of all proposed Facility components (e.g., PV modules, access driveways, electric collection lines, approximate limits of disturbance, O&M building, any stormwater management features, and any battery storage), delineated wetlands, and all anticipated construction staging/material laydown areas, which is where the contractor trailers/offices and parking areas will be located during construction.

The Article 10 Application will include a landscaping plan that will include any plantings along the fence line of the Facility that may be required as part of visual mitigation. With respect to those areas where trees may be required to be removed due to Facility construction and operation, the Preliminary Design Drawings will depict the Facility footprint using recent aerial imagery. The Article 10 Application will also include a construction and operations plan, indicating all materials lay-down areas, construction preparation areas, major excavation and soil storage areas, and construction equipment and worker parking areas for the Facility.

The Preliminary Design Drawings will be prepared using computer software (e.g.., AutoCAD, MicroStation), will be labeled "preliminary" and/or "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. A single, full-size drawing set will also be provided to the NYSDEC Central Office and Region 9 Staff (total of two full-sized sets provided to NYS DEC), and to NYSDAM Staff. A single, full-size drawing set will also be provided to the Town of Cambria and the Town of Pendleton each. All other printed copies (included with the Application) will be at a legible and reduced size (i.e., 11"x17"), also utilizing a common engineering scale. Additionally, a CD-ROM containing electronic PDF files will be submitted to NYSDPS, NYSDEC, and NYSDAM Staff.

Consistent with the requirements of 1001.11 of the Article 10 regulations, Exhibit 11 of the Application will contain the following information:

(a) Site Plan

Site plan drawings of all Facility components at a common engineering scale as listed at 1001.11(a). Site boundaries and adjoining property will be depicted using publicly available data. The drawings will also include all delineated wetlands (including 100-foot adjacent areas). Specific to construction of a solar facility, the Site Plan drawings will include the following proposed features:

- PV panel locations, and associated mounting features;
- Access roads (temporary and permanent);

- Perimeter fencing;
- Turn-around areas to be used during construction;
- Grading showing proposed final contours;
- Electric collection lines – the required number of circuits for each collection line route will be indicated on site plans; also, overhead (if any) and underground cable routes will be differentiated with specific line-types;
- Transmission line;
- Approximate limits of disturbance for all Facility components (PV panels, inverters, access roads, buildings, electric lines, substation, etc.) based on impact assumptions;
- Clearing limits for all Facility components (PV panels, inverters, access roads, fences, buildings, electric lines, etc.) based on impact assumptions;
- Applicant's proposed setbacks from occupied structures, property lines and easements, existing overhead electric lines, gas transmission pipelines and associated easements, and roads;
- Locations of laydown areas to be used for equipment storage and parking areas;
- Any back-up generators and fuel storage areas;
- Collection substation outline, including local setbacks, access driveway and fence line;
- POI substation outline, including local setbacks, access driveway and fence line; and
- Preliminary location of the O&M building, if needed, and associated local setbacks, access driveway, parking area and any associated septic or water systems;

(b) Construction Operations Plan

The Applicant will provide the information required by 1001.11(b).

(c) Grading and Erosion Control Plans

An erosion control plan will be presented in the Article 10 Application consistent with the requirements of 1001.11(c). Preliminary cut and fill calculations will be included along with a general description of typical cut and fill scenarios. Two-foot contour data will be utilized for engineering and design purposes. Existing and proposed contours for any permanent stormwater retention areas (if known at the time of Application submittal) will be shown on the Preliminary Design Drawings. Exhibit 21 will discuss preliminary cut and fill calculations and pre-Application test borings.

(d) Landscaping Plan

The Applicant will provide the information required by 1001.11(d). With respect to those areas where trees may be required to be removed due to Facility construction and operation, the Preliminary Design Drawings will depict the Facility footprint using recent aerial imagery. An on-site inventory and survey of individual trees to be removed will not

be included in the Application. The Application will also include reference to contingency measures to be developed to address potential visual screening needs for mitigation of impacts at historic resources, community or cultural sites, visually sensitive resources, or public use areas, if such measures are proposed and outlined in Exhibit 20 and/or 24.

(e) Lighting Plan

The Article 10 Application will provide details of lighting associated with the substation and O&M building, and an indication of the measures to be taken to prevent unnecessary light trespass beyond the Facility property line. Manufacturer cut sheets of proposed lighting will be provided, if available.

(f) Architectural Drawings

Architectural drawings for the O&M building, substation, and perimeter fencing (including the type(s) of site perimeter fencing to be installed around Facility sites), as applicable, will be provided in final or preliminary form, depending on availability, as part of the Application.

(g) Typical Design Detail Drawings

The Application/Preliminary Design Drawings will include typical details for Facility components including access roads, buried and above-ground interconnect lines, PV panels and support structures, inverters, typical post-construction stormwater management practices, laydown areas, as well as any other improvements subject to the Siting Board's jurisdiction.

- Typical PV panel details, including the configuration of typical PV panel arrays and mounting details.
- Plan and sections of underground facilities will be provided, including single and multiple-circuit layouts with dimensions of proposed depth and level of cover, separation requirements between circuits, clearing width limits for construction and operation of the Facility, limits of disturbance, and required permanent ROW.
- Elevation plans for overhead facilities (collection and transmission lines [if applicable]) including height above grade, structure layouts, clearing width limits for construction and operation of the Facility, and permanent ROW widths, average span lengths for each proposed layout, and structure separation requirements (for installations containing more than one pole, etc.) for all single and multiple-circuit layouts.
- Typical support structures to be used for solar panel installations
- Typical details of any potential protection measures of existing pipelines.
- A circuit map indicating overhead and underground installations and the number of circuits per proposed run.
- Typical details associated with stream crossings and trenchless installations.

- Examples of typical technical and safety manuals for the types of solar panels that are anticipated to be used in the Facility will be provided at the time of Application.

(h) Interconnection Facility Drawings

A single line drawing of the POI substation will be included in the SRIS, which will be submitted with the Article 10 Application under separate confidential cover. The general arrangement of the POI substation will also be included with the Article 10 Application.

(i) Engineering Codes, Standards, Guidelines, and Practices

The Article 10 Application will provide a representative list of applicable codes, standards, guidelines, and practices that the Applicant intends to conform with when planning, designing, constructing, operating and maintaining the Facility.

(j) Protective Measures

The Article 10 Application will include details and descriptions of any protective measures for Facility components within or adjacent to "Flood Hazard Areas." If this information is not available, a description of potential measures to be utilized will be included.

2.12 CONSTRUCTION

In general, ground mounted PV projects typically require minimal impacts to the environment during construction. In some places, earth moving would be required to level access driveways, create stormwater swales or management ponds, level the earth under inverter/substation equipment pads, and dig vaults for step-up transformers. Tree removal may also involve soil disturbance, though the site will be designed to maximize the use of fields in order to minimize the need for tree removal. Bear Ridge Solar will consult with local stakeholders to determine what construction activities, if any, should be restricted in order to minimize noise, light, and construction traffic impacts to the community. The Article 10 Application will also provide details on how the proposed construction methods are less invasive than construction methods associated with most conventional energy generating facilities.

Gravel surfaces will typically be used for temporary and permanent access driveways, and existing driveways and tractor paths will be followed to the maximum extent practical. For the most part, large equipment like inverters, step-up transformers, and potentially batteries, may require placement with 25-50ft cranes. Access driveways to inverter and substation locations would generally be designed to accommodate cranes and multi-axle delivery trailers. Equipment laydown areas would be sited near these driveways to minimize the need for an extensive access driveway network.

Regular site inspections will be performed to ensure construction is in compliance with engineering designs and regulatory requirements. The Applicant will provide a Preliminary Quality Assurance and Control Plan that will be included in the Application. In addition, to assure compliance with various environmental protection commitments and permit conditions, the Applicant will provide funding for an independent, third-party Environmental Monitor to oversee Facility construction and to ensure compliance with all applicable environmental conditions. The reporting procedures for the Environmental Monitor will be described in the Article 10 Application. The Applicant will submit the final Quality Assurance and Control Plan to the Siting Board prior to construction.

The Applicant will require its contractors to conform to the requirements of the Public Service Commission's regulations regarding the protection of underground facilities (16 NYCRR Part 753) and the Applicant will become a member of Dig Safely New York. Because the Facility area is rural in nature, rather than a more suburban or urban setting, there are fewer existing utility systems with which the Facility may interfere. The first step in avoidance of interference with existing utility systems is to identify those entities that have utilities within the Facility Site. Known utilities with assets will receive updates and notifications pertaining to the Facility. The Applicant will also talk to landowners regarding utilities located on their properties. This information on utilities will be considered during Facility component siting in order to avoid and minimize conflicts with utilities.

The Applicant will also coordinate with public (i.e., NYSDPS) and private (i.e., National Grid, GeoTel Communications, Inc., etc.) entities regarding other available underground major utilities. Post-construction, the Applicant will register with one-call to ensure that its utilities and any underground collection lines are registered so that they are not impacted by future earth work.

Exhibits 2 and 25 of the Application will include a discussion of methods the Applicant intends to use to notify members of the public regarding anticipated road closures and other construction activities which might be disruptive to the normal flow of traffic. These methods will be developed in consultation with host municipalities and highway departments. The Complaint Resolution Plan that will be provided with the Application will discuss how public complaints will be handled, documented, and resolved during construction and operation of the Facility.

Consistent with the requirements of 1001.12 of the Article 10 regulations, Exhibit 12 of the Application will contain the following information:

(a) Preliminary Quality Assurance and Control Plan

The Applicant agrees to provide the information required by 1001.12(a), which will include a Preliminary Quality Assurance and Control Plan and will describe the procedures it will follow to notify the public regarding construction activities, schedule and applicable safety and security measures. The Application will also include a discussion of the Applicant's proposed environmental compliance monitoring plan (e.g., duties of the monitor(s) and reporting responsibilities) and a description of how the Applicant will ensure conformance with applicable design, engineering, and installation standards, including construction codes applicable to the solar panel structures.

(b) Conformance with Public Service Commission Requirements

The Applicant will provide the information required by 1001.12(b)

(c) Plans to Avoid Interference with Existing Utility Systems

The Applicant will provide the information required by 1001.12(c). The Application will include results of consultations with utility owners and will include a list of any utility owner criteria regarding crossing of, or installations nearby, existing utilities; specific criteria will be presented including a description of design and proper layout of the proposed Facility to avoid effects on existing pipeline integrity and right-of-way; separation requirements or recommendations of utility owners (including electric and communications facilities, gas well, and pipeline owners) and descriptions and typical details of any protective separation criteria, design measures and features to be applied at crossings of or co-located with existing utilities. Final design of any layouts and protection measures regarding existing pipelines will be submitted to NYSDPS as a compliance item upon completion of design.

(d) Procedures for Addressing Public Complaints and Disputes

The Applicant will prepare a formal Complaint Resolution Plan which will include specifications of commitments for addressing public complaints, and procedures for dispute resolution during Facility construction and operation. The Complaint Resolution Plan will be easily accessed, tracked to time of resolution, include input from construction managers as appropriate, and will clearly define responsibilities for issue resolution. The complaint process will have assigned personnel to track the resolution of the complaint from the time of receipt, verification, resolution development, implementation and confirmation of resolution. In addition, the complaint resolution plan will:

- Include a procedure for transmittal of complaint logs to NYSDPS. The complaint log will list all complaints and resolutions, to be maintained during construction and operation of the Facility and will be available to NYSDPS upon request;
- Describe actions the Applicant will take if a complaint remains unresolved after all steps are followed;
- Indicate whether complaints will be accepted from the toll-free line, as well as electronically through e-mail and the project website. In addition, complaint handling needs to address both written and verbal complaints. Verbal complaints received during construction need to be converted to written documents that can be tracked by the certificate holder and contractors and be reported to NYSDPS Staff; and
- Identify and include any procedures or protocols that may be unique to each phase of the project (e.g. construction, operation, decommissioning of facilities) or complaint type (e.g. noise, degraded television service). For example, during construction, complaint calls need to be handled locally and quickly.

2.13 REAL PROPERTY

The Application will provide tax parcel maps for Facility Site parcels, which will also indicate public and private roads on or adjoining Facility Site parcels or proposed for access to Facility Site parcels, the owner of record for all adjacent parcels, existing easements or encumbrances on Facility Site parcels, and zoning designations for Facility Site parcels and adjoining properties.

The Article 10 Application will provide a description of parcels that are owned, leased or under option by the Applicant for the Facility, including ingress/egress access to public roads, easements for transmission and collection lines, and will provide a statement that the Applicant has or will obtain the necessary real property rights for all parcels needed for the Facility. The Application will also include a discussion of any property rights or easements, such as conservation easements, which the Applicant proposes to acquire in connection to its proposed mitigation plans, such as grassland habitat. The Applicant will continue to work towards securing all land necessary to construct and operate the Facility, and for any proposed mitigation efforts which may require acquisition of land rights and will include in the Application a demonstration that it has obtained or can obtain those interests necessary to construct the Facility and its interconnection(s).

Consistent with the requirements of 1001.13 of the Article 10 regulations, Exhibit 13 of the Application will contain the following information:

(a) Real Property Map of Generating Site

1001.13(a) shall include a tax parcel map of the Facility Site and adjacent parcels. The data for the map will be obtained from Niagara County GIS (parcels) along with United States Census Bureau (TIGER/line files) and the NYSGIS Clearinghouse that will depict the following:

- The tax parcel IDs for land parcels that are part of, and adjacent to, the Facility Site;
- Current land use and zoning for the parcels that are part of, and adjacent to, the Facility Site;
- Necessary access and utility easements for the Facility;
- Proposed laydown area(s) and O&M building;
- Public roads planned for use as access to the Facility Site; and
- An identification of properties proposed to be acquired in fee ownership, if any, by the Applicant.

(b) Real Property Map of Interconnection Facilities

1001.13(b) shall include maps showing all proposed interconnection facilities and associated access drives/laydown areas, including land owned by or under contract to the Applicant.

(c) Demonstration that the Applicant Has Obtained Title or Lease Interest in Facility Area

The Applicant agrees to provide the information required by 1001.13(c).

(d) Demonstration that the Applicant Has Obtained Property Rights to Interconnection Site

The Applicant agrees to provide the information required by 1001.13(d).

(e) Improvement District Extensions

1001.13(e) shall include an identification of any improvement district extensions necessary for the Facility and a demonstration that the Applicant has obtained or can obtain such extensions. At this time, it is not anticipated that improvement districts would need to be extended in connection with the Facility.

2.14 COST OF FACILITIES

The Application will contain an estimate of capital costs of the Facility, including development costs, construction design and planning, equipment costs, and construction costs. The Application will provide an internal work paper that describes the assumptions in estimating that cost.

(a) Total Capital Costs

Capital costs will be presented in the Article 10 Application and will include development costs, construction design and planning, equipment costs, and construction costs, and will be broken down by:

- PV Modules/Equipment
- Engineering
- Construction (including contingency)
- Insurance
- Development (including contingency)

(b) Source of Cost Estimates

The basis for the Facility's cost estimate will be presented in the Article 10 Application and is anticipated to be based on industry standards, Applicant experience, and historical and current price quotes.

(c) Work Papers

The Applicant will provide an internal work paper that describes the assumptions in estimating the total capital costs as described above in (a). This information is proprietary, confidential, and consists of Company trade secrets that are not provided to the public. As such, this information will be submitted under separate and confidential cover and will seek the requisite trade secret protection for this information pursuant to NY Public Officer's Law Section 87(2)(d) and 16 NYCRR 6-1.3 and 6-1.4.

2.15 PUBLIC HEALTH AND SAFETY

This section of the Article 10 Application will provide an evaluation that identifies, describes, and discusses all potential significant adverse impacts of the construction and operation of the Facility, the 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.

Solar generated power is unlike conventional power generating facilities as solar farms produce energy without emitting pollutants that decrease air quality. This is a major public health benefit since, as has been well-established in scientific research and literature, air pollution and climate change have significant impacts on human health and the environment.

New York State's 2015 SEP involves reducing GHG emissions from the energy sector, highlighting those efforts as critical to protecting the health and welfare of New Yorkers. Clean air is essential to New Yorkers' health and quality of life. New York's energy provides reliable energy sources to New Yorkers; however, it is also the cause of significant impacts on the State's natural resources and public health, principally because of emissions released when carbon-based fuels are burned (e.g. fossil fuels). Some of the compounds and substances emitted are associated with serious health conditions and contribute to climate change that threatens New York's residents and natural resources. The health risks associated with the combustion of carbon-based fuels are not scientifically associated with solar, wind energy and hydroelectric power. While the use of these means of producing electricity are not risk-free, increasing the fraction of New York's electricity needs met by solar, wind, and water will, in general, decrease health risks associated with electricity production. The recognition of the benefits of renewable energy has significantly contributed to New York's nation-leading commitment to renewable energy development through the CES and is in part a leading reason for New York establishing the 50% by 2030 goal set forth in the New York SEP.

As mentioned above, one of the advantages of producing electricity from PV modules is that it does not produce any emissions during operation. Solar facilities do produce a minimal amount of liquid and solid wastes during construction. The Application will include a discussion of disposal methods for the limited waste generated by construction or operation of the Facility, along with the end-of-life disposal of the modules, and how this disposal will be handled in accordance with all applicable laws and regulations pertaining to such wastes.

In the Applicant's experience, when a project, such as the Facility, is properly sited and designed, significant impacts to public health and safety typically do not occur. The Article 10 Application will include a detailed evaluation on potential impacts to public health and safety. The Applicant is committed to developing and operating its projects in a safe and environmentally responsible manner. The Facility will be constructed in accordance with applicable health and safety

standards. However, the Applicant will present mitigation measures in the Application, such as a Complaint Resolution Plan, that are proposed to offset any potential impacts.

The Article 10 regulations require the assessment of potential risks associated with the construction and operation of the Facility. In addition, stakeholders identified concerns that the Facility had the potential to generate heat which would radiate onto nearby properties. The Application will discuss the available research and information related to this concern, including whether it has been observed at other solar facilities and whether it is anticipated to occur. Public health issues associated with the construction of the Facility are comprised of typical risks associated with commercial construction projects. The Applicant will demonstrate that the aforementioned risks have been identified and evaluated.

Consistent with the requirements of 1001.15 of the Article 10 Regulations, Exhibit 15 of the Application will contain the following information.

(a) Gaseous, Liquid, and Solid Wastes to be Produced During Construction and Operation

The Applicant will provide the information required by 1001.15(a) in the Article 10 Application. Waste generation through the life of the Facility will also be discussed (construction, operations and maintenance, and termination).

(b) Anticipated Volumes of Wastes to be Released to the Environment

The Applicant agrees to provide the information required by 1001.15(b).

(c) Treatment Processes to Minimize Wastes Released to the Environment

The Applicant agrees to provide the information required by 1001.15(c).

(d) Procedures for Collection, Handling, Storage, Transport, and Disposal of Wastes

The Applicant agrees to provide the information required by 1001.15(d).

(e) Wind Power Facility Impacts

This is not applicable to solar power facilities.

(f) Public Health and Safety Maps

Public health and safety-related maps as described in 1001.15(f) will be prepared using data from the NYSGIS Clearinghouse, FEMA, local municipalities, NYSDEC, NYSDOH, and the USGS, as well as local sources for emergency response resources, including the Niagara County GIS website.

(g) Significant Impacts on the Environment, Public Health, and Safety

The Applicant agrees to provide the information required by 1001.15(g).

(h) Unavoidable Adverse Impacts and Appropriate Mitigation/Monitoring Measures

The Applicant agrees to provide the information required by 1001.15(h).

(i) Irreversible and Irretrievable Commitment of Resources

The Applicant agrees to provide the information required by 1001.15(i).

(j) Impact Minimization Measures

The Applicant will provide the information required by 1001.15(j).

(k) Mitigation Measures

The Applicant will provide the information required by 1001.15(k).

(l) Proposed Monitoring

The Applicant agrees to provide the information required by 1001.15(l).

2.16 POLLUTION CONTROL FACILITIES

The proposed Facility will not require pollution control facilities, and as such, the requirements of 1001.16 are not applicable and will not be included in the Article 10 Application. Please see Section 2.17 of this PSS for information on temporary emissions during construction, and Section 2.23 for information on the Facility's SPDES General Permit for construction.

2.17 AIR EMISSIONS

The Facility will produce electricity without generating any air emissions. However, the Application will include a discussion of the anticipated air related benefits from the Facility. The Application will also discuss impacts to air quality expected to result from the proposed Facility's construction and operation, including fugitive dust and emissions from construction vehicles and fuel-fired generators, and identification of appropriate control and mitigation measures to minimize adverse impacts. The Application shall identify any air permitting and registration requirements.

Consistent with the requirements of 1001.17 of the Article 10 regulations, Exhibit 17 of the Application will contain the following information:

(a) Compliance with Applicable Federal, State, and Local Regulatory Requirements

The Applicant agrees to provide the information required by 1001.17(a). Since solar facilities generate electricity without releasing pollutants into the atmosphere, the proposed facility will not be subject to new source performance standards and will not require air pollution control permits under the Clean Air Act or New York State law or regulation.

(b) Assessment of Existing Ambient Air Quality Levels and Trends in the Region

The Applicant agrees to provide the information required by 1001.17(b) using the most recent summary of the NYSDEC Division of Air Resources air quality data, specific to NYSDEC Region 9.

(c) Emissions by Combustion Sources Table

Solar generation facilities generate electricity without combusting fuel or releasing pollutants into the atmosphere. Therefore, the table required by 1001.17(c) summarizing the rate and amount of emissions is not applicable to the Facility and will not be included in the Article 10 Application.

(d) Potential Impacts to Ambient Air Quality

The Applicant agrees to provide the information required by 1001.17(d). The Article 10 Application will include a discussion of the potential impacts to air quality that may be expected from Facility construction and operation. Since solar facilities generate electricity without combusting fuel or releasing pollutants into the atmosphere, the discussion will focus on the potential impacts to ambient air quality resulting from the construction of the Facility, and from maintenance activities during Facility operation. Such impacts could occur as a result of emissions from engine exhaust and from the generation of fugitive dust during earth moving activities and travel on unpaved roads. The increased dust and emissions will not be of a magnitude or duration that will significantly impact local air quality. Dust control procedures will be implemented to minimize the amount of dust generated by construction activities in a manner

consistent with the Standards and Specifications for Dust Control, as outlined in the New York State Standards and Specifications for Erosion and Sediment Controls (NYSDEC, 2016b).

(e) Offsite Consequence Analysis for Ammonia Stored Onsite

No ammonia will be stored onsite during Facility construction or operation. Therefore, the offsite consequence analysis required by 1001.17(e) is not applicable to the Facility and will not be included in the Article 10 Application.

2.18 SAFETY AND SECURITY

Overall safety and security risks associated with the Facility are anticipated to be minimal. The Applicant will develop, based on its experience with other solar projects and reasonable expectations associated with the Facility, preliminary plans for site security, health and safety, and emergency action. For purposes of developing emergency response plans and notification procedures, the Applicant will consult with relevant local, county, and state emergency responders and agencies. The Application will include a preliminary Emergency Action Plan (EAP) which will be provided to the local emergency first responders that serve the Facility prior to Application submission. In addition, a SPCC plan will be prepared, and implemented, for both the construction and operation phases of the Facility.

The Article 10 Application will provide a discussion on how the Applicant will comply with the North American Electric Reliability Corporation's (NERC's) CIP standards on cybersecurity of the electrical grid.

It is anticipated that the Applicant will own and operate the Facility. Thus, the Facility Owner will be responsible for site safety and security during construction and operation. To reduce safety and security concerns, public access to the Facility shall be limited. The Article 10 Application will discuss site security measures in additional detail.

Exhibit 18 of the Application will contain the information consistent with the requirements of 1001.18 of the Article 10 Regulations.

2.19 NOISE AND VIBRATION

As will be described in this Section of the Article 10 Application, compared with all other types of power generation facilities, the potential for any kind of community noise impact from a photovoltaic solar energy project is near non-existent. Moreover, such facilities have the unique characteristic of only operating during daylight hours when noise is much less likely to be an issue in the first place. Any possible concerns about the sound emissions from a solar project are largely confined to the step-up transformer in the new substation, electrical inverters installed within the interior of the various PV module arrays, and some short-lived activities during construction (e.g. driving piles).

There are no vibration issues associated with the operation of a solar facility. The construction of the Facility will include the insertion into the ground of the piles on top of which the racking will sit. These piles will be installed with pile driving or drilling machines, which could create vibration impacts in the immediate vicinity during construction. The Applicant will address potential vibration impacts during construction on nearby sensitive receptors, nearby facilities sensitive to vibrations (such as laboratories or medical facilities), wells and buried infrastructure such as gas pipelines, and nearby historic/cultural resource sites which might incur foundational or structural damage as a result of pile driving or drilling.

The power generated by the Facility will be collected and routed to a step-up transformer in a new substation associated with the Facility. This substation will be similar in design and operation to other like-sized 34.5/115 kV substations, a typical size for the power industry. The potential noise impact from a substation for the proposed Facility is essentially a matter of how prominent and audible the tonal sound emissions from the transformer(s) are at the nearest residences. Tones at harmonics of 60 Hz are generated by all transformers and are always noticeable as a hum, or buzz close to the unit; however, the prominence of these tonal peaks diminish quickly with distance and disappear into the background as that distance increases.

Background sound monitoring surveys during both winter/leaf-off and summer/leaf-on conditions will be carried out to measure the existing sound levels at positions representative of the nearest potentially sensitive receptors to the project substation as the first step in a modified Composite Noise Rating (CNR) analysis to establish the baseline background conditions. In addition, the Article 10 Application will include a noise impact assessment to evaluate the projected sound emissions from the proposed substation and inverters. The sensitive receptors nearest to the substation and inverters will be identified as design points for both ambient sound monitoring and modeling purposes.

The Article 10 Application will explain why noise from solar panels and other components is not anticipated, and, in accordance with the requirements of § 1001.19, will include a Noise Impact Assessment (NIA), as outlined below, for the purposes of anticipating potential impacts from noise-producing equipment, such as inverters and the substation. Potential construction noise impacts also will be discussed in Exhibit 19.

Consistent with the requirements of 1001.19 of the Article 10 Regulations, Exhibit 19 of the Application will contain the following information:

(a) Substation Sound Emissions

A NIA, as outlined in the following subsections, to evaluate the projected sound emissions from the proposed substation.

(1) Sensitive Sound Receptor Map

The Applicant will prepare and submit a map of the Study Area showing the Facility's substation and step up transformer in relation to the nearest potentially sensitive sound receptors (residences, schools, hospitals, etc.).

(2) Ambient Pre-Construction Baseline Noise Surveys

Background sound monitoring surveys during both winter/leaf-off and summer/leaf-on conditions will be carried out to measure the existing sound levels at positions representative of the nearest potentially sensitive receptors to the project substation as the first step in a modified Composite Noise Rating (CNR) analysis to establish the baseline background conditions. The full and 1/3 octave band spectra on a continuous 10-minute time resolution will be measured over at least a 7-day period and will record, at a minimum, the L90, Leq, Lmin and Lmax levels as calculated and stored in real-time by the sound level meters. The presence of any existing tones that might be present at the receptor points will be evaluated per Annex K Objective method for assessing the audibility of tones in noise of ISO 1996-2:2017(E) Acoustics – Description, measurement and assessment of environmental noise, 2017. This method defines prominent discrete tones in terms of the prominence of the 1/3 octave band containing the suspected tone above the average of the neighboring 1/3 octave bands. Prominence/perceptibility is frequency dependent and the thresholds are generally taken as 15 dB for tones at or below 125 Hz, 8 dB for tones between 160 and 400 Hz and 5 dB for all higher frequencies.

(3) Modeling of Operational Sound Levels

The octave band sound power level spectrum of the proposed step up transformer will be calculated based on manufacturer specifications (ONAN, ONAF1, and ONAF2) or otherwise estimated based on transformer specifications and noise prediction formulae. This power level spectrum will then be conservatively projected to the nearest potentially sensitive receptors around the substation by using a computer model based on the ISO 9613-2 standard in order to obtain an initial CNR ranking for each location. An A-weighted sound level contour map out to 30 dBA including sensitive sound receptors and participant boundary lines will be provided with 1 dB resolution.

(4) Impact Assessment of Complaint Potential and Community Noise Reaction.

The study will determine subsequent corrections to the initial CNR ranking at each design point based on the measured octave band (L90) daytime background sound level (since the project will only be operational during daylight hours), seasonality, character, and attitudinal adjustments as indicated in the Electric Power Plant Environmental Noise Guide. A final CNR rating for each location will be determined and used to determine if noise mitigation, such as a local noise barrier for the transformer or a low noise core, would be appropriate to maintain a CNR rating of C (no reaction to sporadic complaints) or less.

(b) Inverter & Step-up Transformer Sound Emissions

Apart from the substation transformer, the only other sound sources of any possible significance are the electrical inverters and step-up transformers (electrical cabinets) used to convert locally generated DC current into AC power that is then routed to the substation through underground collector cables. Typically, these electrical cabinets are situated within and near the center of each solar field, or independent group of solar panels, so they are usually a considerable distance from the perimeter fence and potential neighbors beyond. In any event, the sound emissions from the proposed inverters will be quantitatively evaluated for any potential community noise impact by modeling the measured or assumed sound emissions relative to potentially sensitive receptors using preliminary site plans or other information on the probable number and locations of inverters. It should be noted that the exact location of every inverter is not typically known or defined early in the design process, but the sound analysis will make use of the best available information at the time of the assessment. The analysis for the proposed inverters will be conducted in the same manner and contain the same information as described in section (a) above.

(c) Construction Noise and Vibration

The Article 10 Application will include a description of the planned construction process, such as whether the mounting posts will be driven into the ground or screwed, and an evaluation of the possibility of noise or vibration-related -related disturbance from any construction phase or activity.

2.20 CULTURAL RESOURCES

The Applicant does not anticipate significant impacts to archaeological or cultural resources due to Facility construction or operation. Relative to other types of energy generation projects, utility scale solar projects present a lower risk for impacts to archaeological resources due to the comparatively minimal amount of ground disturbance required during construction and operation of a solar facility. The site design and construction elements to be used in constructing the Facility will minimize the need for soil disturbance wherever possible, by shifting the project components and by utilizing low-impact construction methods. For past industrial-scale solar facilities, NYSOPRHP has indicated that Phase IB archaeological survey would be necessary only for those areas of significant proposed ground disturbance (access roads, areas of grubbing or grading, ancillary facilities, retention ponds, staging areas, and utility trenches and drainages over 1-foot wide). Phase 1B archaeological testing is not recommended for panel arrays, perimeter fencing and utility poles that are driven into the ground (with no grubbing or grading involved for placement)[11].

The Applicant will initiate consultation with the NYSOPRHP to develop the scope and methodology for cultural resources studies for the Facility. Formal consultation with the NYSOPRHP will include initiating Facility review and consultation through NYSOPRHP's Cultural Resources Information System (CRIS) website[12] and submission of technical reports/work plans. A preliminary review of CRIS and historical documentation relevant to this area was performed by EDR. According to CRIS, there are 8 previously recorded archaeological sites within one mile of the Facility Area, consisting of 6 pre-contact Native American sites and 2 Historic-period sites. Based upon these preliminary findings, EDR has assessed the Facility Area as archaeologically sensitive with a potential for archaeological resources to be present at the Facility Site. Any required archaeological studies will be conducted under the supervision of a Registered Professional Archaeologist (RPA) in a manner consistent with the NYSOPRHP *Phase I Archaeological Report Format Requirements*[13] and the New York Archaeological Council (NYAC) *Standards for Cultural Resource Investigations and Curation of Archaeological Collections in New York State* (the NYAC *Standards*)[14]. The Archaeological Resources survey will be performed within the Facility Site where Facility components are proposed.

A 2-mile radius Study Area will be evaluated in the Application to ensure that potential visual effects on historic properties are adequately considered. A preliminary review of the NYSOPRHP CRIS website has identified 17 previously identified historic properties that occur within 2 miles of the Facility, consisting of a portion of one National

[11] NYSORPHP. 2018. Archaeology comments for Solar Farm Projects. Division of Historic Preservation, Waterford, NY.
[12] NYSORPHP's Cultural Resources Information System is accessible at: http://www.nysparks.com/shpo/online-tools/.
[13] New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP). 2005. New York State Historic Preservation Office (SHPO) Phase 1 Archaeological Report Format Requirements. NYSOPRHP, Waterford, NY.
[14] New York Archaeological Council (NYAC). 1994. *Standards for Cultural Resources Investigations and the Curation of Archaeological Collections in New York* State. New York State Office of Parks, Recreation, and Historic Preservation, Waterford, NY.

Historic Landmark historic district, two properties determined by NYSOPRHP to be eligible for listing on the NRHP, and 14 properties whose eligibility has not been formally determined. A thorough inventory of historic resources, including any locations/resources proposed for inclusion by agencies and municipalities and other through ongoing outreach efforts, will be compiled in support of the Historic Resources Survey and Visual Impact Analysis (VIA) reports and will be evaluated for potential visual impacts therein.

The Facility's potential effect on historic resources would be a change (resulting from the introduction of PV panels or other Facility components) in the visual setting associated with a given historic resource. The potential effect of the Facility on the visual setting associated with historic resources is highly variable and is dependent on a number of factors including the distance to the Facility from the identified historic resource, the number of visible panels/components, the extent to which the Facility is screened or partially screened by buildings, trees, or other objects, and the amount of existing visual clutter and/or modern intrusions in the view.

Visibility of the Facility from surrounding areas is anticipated to be very limited because the height of the PV arrays will not exceed approximately 12 feet. Due to this limited visibility, an Area of Potential Effect (APE) for Indirect (i.e. visual and auditory) Effects of 2-miles will be used for the aboveground Historic Resources Survey.

Construction of the Facility is not anticipated to require the demolition or physical alteration of any buildings or other potential historic resources. No direct physical impacts to historic properties are anticipated to occur as a result of the Facility. Historically significant properties are defined herein to include buildings, districts, objects, structures and/or sites that have been listed on the NRHP, as well as those properties that NYSOPRHP has formally determined are eligible for listing on the NRHP. A 2-mile radius Study Area will be evaluated in the Application to ensure that potential visual effects on historic properties are adequately considered. A preliminary review of the NYSOPRHP CRIS website has identified 17 previously identified historic properties that occur within 2 miles of the Facility, consisting of a portion of one National Historic Landmark historic district, two properties determined by NYSOPRHP to be eligible for listing on the NRHP, and 14 properties whose eligibility has not been formally determined. A thorough inventory of historic resources, including any locations/resources proposed for inclusion by agencies, municipalities, and local parties through outreach efforts, will be compiled in support of the Historic Resources Survey and Visual Impact Analysis (VIA) reports and will be evaluated for potential visual impacts therein.

Consistent with the requirements of 1001.20 of the Article 10 regulations, Exhibit 20 of the Application will contain the following information:

(a) Archaeological Resources

The Article 10 Application will contain a full analysis of the potential impacts of the construction and operation of the Facility on archaeological resources.

(1) Summary of Impacts and Avoidance Measures

The Applicant will seek to avoid impacts to archaeological sites identified within the Facility Site. As noted above, the development of the proposed Facility represents a lower risk to archaeological resources (relative to other types of energy development). A Phase IB archaeological survey will be conducted and any archaeological resource identified through Phase IB fieldwork will be summarized, along with potential impacts to such resources and proposed avoidance measures, in the Article 10 Application. It is expected that once identified, archaeological resources will be avoided by all Facility components with the potential to cause adverse impacts (see discussion of adverse impacts above). The Article 10 Application will include a summary of potential impacts as well as potential impact avoidance and minimization measures.

(2) Phase IA Cultural Resources Study

The Applicant will prepare a *Phase IA Archaeological Resources Survey,* which will be submitted through the CRIS website. The purpose of the Phase 1A archaeological resources survey is to: 1) define the Facility's APE relative to archaeological resources based on the anticipated area of disturbance for Facility components; 2) determine whether previously identified archaeological resources are located in the APE; and, 4) propose a methodology to identify additional archaeological resources within the APE, evaluate their eligibility for the S/NRHP, and assess the potential effect of the Facility on those resources.

(3) Phase IB Cultural Resources Study

A Phase IB Archaeological Survey will be conducted to determine whether archaeological sites are located in the areas of significant proposed ground disturbance for the Facility. The Phase IB survey will be conducted under the supervision of an RPA in a manner consistent with the NYSOPRHP *Phase 1 Archaeological Report Format Requirements* (2005) and the NYAC *Standards for Cultural Resource Investigations and Curation of Archaeological Collections in New York State* (the NYAC *Standards,* 1994). This report will be summarized in the Article 10 Application and appended to Exhibit 20. The Phase IB archaeological survey will be conducted in accordance with the methods proposed in the Phase IA archaeological survey, based on consultation with NYSOPRHP.

(4) Phase II Study

In the event that a potentially significant archaeological resource is identified within the Facility Site, and Facility components cannot be relocated to avoid impacts to the resource, then a Phase 2 archaeological site investigation (in consultation with NYSOPRHP) will be conducted. If recommended avoidance measures (e.g., such as removing or re-locating Facility components away from identified archaeological sites) are insufficient to avoid adverse impacts, then Phase 2 archaeological investigations may be conducted to assess the boundaries, integrity and significance of cultural resources identified during the Phase 1B archaeological survey. Any necessary Phase 2 studies would be designed to obtain detailed information on the integrity, limits, structure, function, and cultural/historic context of an archaeological site, sufficient to evaluate its potential eligibility for listing on the S/NRHP. The need for and scope of work for such investigations would be determined in consultation with NYSOPRHP and DPS upon completion and review of the Phase 1B survey report.

(5) Archaeological Material Recovered During Cultural Resources Studies

In the event that any artifacts are recovered during the cultural resources studies for the Facility, the Applicant agrees to provide the information required by 1001.20(a)(5). A complete listing of any recovered artifacts will be included in the Phase IB Archaeological Survey Report. The Applicant understands that all artifacts recovered during this contract will be the property of the landowner, from which the artifacts were recovered. It is anticipated that all artifacts will be processed in a manner consistent with professional standards, such as the NYAC Standards (1994), suitable for accessioning to the New York State Museum (in Albany), in the event that appropriate local repositories cannot be identified.

(6) Unanticipated Discovery Plan

The Article 10 Application will include an Unanticipated Discovery Plan that identifies the actions to be taken in the unexpected event that resources of cultural, historical, or archaeological importance or human remains are encountered during Facility construction. The plan will include a provision for work stoppage upon the discovery of possible archaeological or human remains. Evaluation of such discoveries, if warranted, will be conducted by a professional archaeologist.

(b) Historic Resources Survey

The Facility will have no physical impacts to historic resources (i.e., no historic structures will be damaged or removed). The Facility's potential effect on a given historic property would be a change (resulting from the introduction of PV panel arrays or other Facility components) in the property's visual setting. Therefore, the APE for Indirect Effects on historic resources must include those areas where Facility components (including PV panel arrays) will be visible and where there is a potential for a significant visual or auditory effect.

For recent solar projects reviewed under Article 10[15] NYSOPRHP has indicated that a five-mile Study Area be established for assessing indirect effects of the Facility on historic resources. A preliminary viewshed analysis for the proposed solar panels indicates that because of the Facility's low-profile, as well as screening afforded by vegetation and existing structures, visibility of the planned components is anticipated to be limited to the immediate vicinity of the Facility. Therefore, due to the nature of the technology and the setting specific to the Facility, the Applicant is proposing that the APE for Indirect Effects be defined as those areas of predicted visibility of the Facility (per the viewshed analysis) within a 2-mile (3.2-km) radius from (and including) all Facility components. The APE for Indirect Effects, as described herein, consists of all areas within a 2-mile radius of the Facility from which Facility components are predicted to be visible (the Visual Study Area is shown in Figure 5).

The Applicant will complete a historic resources survey of the 2-mile APE for Indirect Effects, as required by 1001.20(b). The methods and results of the survey will be summarized in an illustrated Historic Resources Survey Report, along with an annotated properties table that will include an entry for each identified property. The annotated properties table will include one or more photographs of each property, a brief description of the property (name, address, estimated age, architectural style, materials, etc.), an assessment of its condition, and an evaluation of significance. The initial survey results and recommendations of S/NRHP eligibility will be provided to NYSOPRHP via the CRIS website. The Applicant will request that NYSOPRHP review these results and provide determinations of eligibility prior to completing a historic resources visual effects analysis for the Facility, so that only the potential effects of the Facility on historic properties determined eligible by NYSOPRHP are considered.

Following NYSOPRHP's review of the Historic Resources Survey results (described above) for the Facility, the Applicant will prepare a Historic Resources Effects Analysis that will evaluate the potential visual and auditory effects of the Facility on properties determined by NYSOPRHP to be S/NRHP-eligible. This will include consideration of distance and the effect of vegetation and other landscape features that may screen or minimize views of the Facility from historic resources and will include visual simulations where appropriate. The visual effects analysis will specifically address the visual effect of the Facility on the setting associated with S/NRHP-eligible and listed sites and/or districts within the APE. The visual effects analysis will also include recommendations regarding potential cultural resources mitigation projects, as appropriate. The Historic Resources Effects Analysis will be provided to NYSOPRHP via the CRIS website and provide the basis for the evaluation of potential visual effects on historic resources included in Exhibit 24 of the Article 10 Application. The completed Historic Resources Effects Analysis will be submitted as part of the Article 10 Application.

[15] The Mohawk Solar Project (17PR06371) in the Towns of Canajoharie and Minden, Montgomery County, New York.

2.21 GEOLOGY, SEISMOLOGY, AND SOILS

This Exhibit will include a study of the geology, seismology, and soils conditions on the Facility Site and potential impacts of the Facility construction and operation on these conditions, if any are anticipated. The Exhibit will consist of the identification and mapping of existing conditions, an impact analysis, and proposed impact avoidance and mitigation measures to the extent such impacts are discovered. Preliminary areas for Facility development have been identified and Facility design and layout is currently ongoing.

The Facility Site is located within the Erie-Ontario Lowlands physiographic province of New York State. Niagara County's elevation ranges from 230 – 800 feet above sea level. The Erie-Ontario Lowlands are characterized by low hills and relief caused by glacial meltwater flooding into lacustrine basins. The majority of the county lies on consolidated bedrock of sedimentary origin with unconsolidated surficial deposits of alluvial, lacustrine, or glacial origin[16]. The Soil Survey of Niagara County, New York[1] will be used to perform an analysis of soils occurring within the Facility Site, and the implications of soil characteristics regarding engineering and construction will be presented in the Article 10 Application.

The Applicant does not expect that Facility-related excavation will result in adverse impacts to geology or soils. Throughout the majority of the Facility Site, earthwork is expected to include only minor site grading, as necessary, to create finished grade slopes suitable for racking installation and stormwater management. The majority of excavation activities will be associated with POI substation construction and potentially for storm water management facilities, should they be deemed necessary. Solar facilities are generally less invasive in comparison to conventional energy production and wind production which require relatively more earth moving. The Article 10 Application will provide a detailed description of construction methodologies and activities associated with the Facility, including the anticipated excavation techniques to be employed. The Applicant does not anticipate significant removal of materials from the site during construction. During excavations, topsoil will be segregated and maintained. Based upon review of publicly available data and the Applicant's experience with solar facility construction, blasting is not anticipated to be required for the construction of the Facility. The impacts of the construction and operation of the Facility on regional geology will be evaluated in the Article 10 Application.

The Article 10 Application will include the results of a Preliminary Geotechnical Study that will be conducted for the proposed Facility. The Geotechnical Study will extensively characterize the soil conditions in the proposed locations of Facility components and address the suitability of these soils for construction of the Facility. The Preliminary Geotechnical Study will be summarized in Exhibit 21 of (and included as an Appendix to) the Article 10 Application.

[16] USDA NRCS, 1972. https://www.niagaraswcd.com/Niagara%20Soil%20Survey%20Book%201972.pdf.

This report will be based on a Facility-specific site visit conducted by a geotechnical expert, review of publicly available data and test borings to be completed at a subset of PV mount and substation locations. In addition, before construction commences, the Applicant will conduct a site survey to stake out the exact location of proposed Facility components. Once the surveys are complete, and if deemed necessary by the balance of plant contractor, a detailed geotechnical investigation will be performed to verify subsurface conditions and allow development of final Facility component design as necessary.

Based on the 2014 New York State Hazard Map,[17] the Facility Site is located in an area of relatively low seismic hazard, with a 2% or less chance that peak ground acceleration in a 50-year window is between 6% and 10% of standard gravity. Records indicate that there have been four earthquakes in Niagara County between 1960 and 2012[18]. The USGS Earthquake Hazards Program does not list any young faults, or faults that have had displacement in the Holocene epoch within the vicinity of the Facility Area[19]. As previously indicated, the Facility appears to have minimal vulnerability associated with seismic events based on review of publicly available data. In addition, there is no significant vulnerability associated with tsunami events in New York State, with the last known occurrence in the past century being in 1929[18].

Consistent with the requirements of 1001.21 of the Article 10 regulations, Exhibit 21 of the Application will contain the following information:

(a) Existing Slopes Map

The Applicant agrees to provide the information required by 1001.21(a). This will include 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 Facility Site and interconnections will be prepared using the USGS National Elevation Dataset. Digital Elevation Model (DEM) data will be processed using ESRI ArcGIS® Software to delineate a drainage area and develop slope mapping. The map will include and label surface water features in and around the Facility Area (streams, rivers, lakes, reservoirs). A preliminary SWPPP, as identified in 1001.23(c)(1), will describe how and where stormwater from the site discharges and will reference the associated tributaries and other water bodies that appear on mapping.

[17] United States Geological Survey (USGS). 2014. *New York State 2014 Seismic Hazard Map*. https://earthquake.usgs.gov/earthquakes/byregion/newyork-haz.php.
[18] New York State Division of Homeland Security (DHSES). 2014. http://www.dhses.ny.gov/recovery/mitigation/documents/2014-shmp/2014-SHMP-full.pdf.
[19] USGS, 2018. https://earthquake.usgs.gov/hazards/qfaults/.

(b) Proposed Site Plan

Facility design and layout is currently ongoing. Preliminary design drawings showing existing and proposed contours at 2-foot intervals will be included in the Article 10 Application as described previously.

(c) Cut and Fill

The Article 10 Application will include preliminary cut and fill calculations based on the above-described contour data. Separate calculations for topsoil, sub-soil and rock will be roughly approximated based on publicly available data from the Niagara County Soil Survey and the results of preliminary geotechnical investigations. A description of typical scenarios that would result in cut and fill necessary to construct the Facility, such as constructing an access road on a side slope, will also be included. Invasive species will be addressed in Exhibit 22.

(d) Fill, Gravel, Asphalt, and Surface Treatment Material

A preliminary approximation of the amount of required fill, gravel, etc. based on the proposed array layout, access roads, collection lines, substation and all other Facility components and construction areas will be included with the Article 10 Application. For example, an access road typical detail will indicate typical width of road and depth of gravel, which will be multiplied by the linear distance of proposed access road.

(e) Type and Amount of Materials to be Removed from the Facility

The Applicant agrees to provide the information required by 1001.21(e).

(f) Excavation Techniques to be Employed

The Applicant agrees to provide the information required by 1001.21(f). A preliminary Inadvertent Return Plan will be included in the Application if horizontal directional drilling is proposed. The preliminary Inadvertent Return Plan will establish proposed setbacks of HDD operations from stream banks, drinking water wells, and other known potential sensitive receptors, and include a description of frac-out mitigation and response measures.

(g) Temporary Cut and Fill Storage Areas

The Applicant agrees to provide the information required by 1001.21(g).

(h) Suitability for Construction

The Application will include the results of a Preliminary Geotechnical Investigation including:

i) Literature review of publicly available data regarding surface and subsurface soil, bedrock, and groundwater conditions;

ii) Detailed summary of preliminary Geotechnical Investigations performed, including a description of the rationale for the selection of boring locations;

iii) Evaluation of the suitability of existing soils for re-use as backfill, including an assessment of the risk of turbine foundation corrosion and degradation. Soils within the Facility Site that are identified as having a moderate or high-risk of corrosion of steel or concrete, as defined by the NRCS Web Soil Survey, will be identified.

iv) A Preliminary Geotechnical Investigation report will be provided as an appendix, summarizing the following:

- Surface soils
- Subsurface soils
- Bedrock conditions
- Hydrogeologic conditions
- Results of test borings advanced within the project area, including copies of field logs for each boring
- Results of laboratory tests of soil samples collected during the advancement of test borings within the Facility Site, including analysis of the Chemical and Engineering Properties
- Seismic considerations
- Frost action and soil shrink/swell potential
- Construction suitability analysis and recommendations

(i) Preliminary Blasting Plan

At this time, blasting is not anticipated to be necessary for Facility construction. However, to the extent that blasting may be required, the Applicant agrees to provide the information required by 1001.21(i).

(j) Potential Blasting Impacts

At this time, blasting is not anticipated to be necessary for Facility construction. However, to the extent that blasting may be required, the Applicant agrees to provide the information required by 1001.21(j).

(k) Mitigation Measures for Blasting Impacts

At this time, blasting is not anticipated to be necessary for Facility construction. However, to the extent that blasting may be required, the Applicant agrees to provide the information required by 1001.21(k).

(l) Regional Geology, Tectonic Setting, and Seismology

The Applicant agrees to provide the information required by 1001.21(l), including any known or suspected areas of karst topography within the Facility Site, tectonic setting, and seismology of the Facility vicinity.

(m) Facility Impacts on Regional Geology

The Applicant agrees to provide the information required by 1001.21(m).

(n) Impacts of Seismic Activity on Facility Operation

The USGS Earthquakes Hazards Program does not identify any young faults within the vicinity of the Facility. Therefore, this topic will not be further addressed in the Article 10 Application.

(o) Soil Types Map

A map delineating soil types within the Facility and associated interconnection sites will be prepared using data from the USDA NRCS Web Soil Survey and Soil Survey Geographic Database (SSURGO). Soils noted for agricultural importance (Prime Farmland, Prime Farmland if drained, Unique Farmland, Farmland of Statewide Importance, and Farmland of Local Importance) will be identified in mapping. Specifically, Prime Farmland, Prime Farmland if Drained, and Farmland of Statewide Importance will be mapped based on data obtained from the SSURGO, while Unique Farmland and Farmland of Local Importance will be mapped based on consultation with the local NRCS office (i.e., assuming the local NRCS office is able to identify the location of such soils). A discussion of current agricultural use and productivity will be included with the Application.

(p) Characteristics of Each Soil Type and Suitability for Construction

The Applicant agrees to provide the information required by 1001.21(p). The geotechnical analysis will generally address the suitability and limitations of existing soils and depth to bedrock for the proposed site development including structural integrity, excavation stability, erosion hazard, and steel and concrete corrosion potential. These discussions will be supported by published information of specific soil types and the findings of the Preliminary Geotechnical Investigation, as well as data from other field surveys. Additionally, BMP's that should be employed by the designer/contractor to help minimize potential risks/hazards will be discussed. Any areas where dewatering is anticipated will be identified and typical dewatering methods will be described.

(q) Bedrock Analyses and Maps

1001.21(q) shall include maps, figures, and analyses on depth to bedrock, underlying bedrock types, and vertical profiles of soils, bedrock, water table, seasonal high groundwater (using USFWS Online Spatial Geology Data, and the USDA NRCS Web Soil Survey), and typical PV module support structure and inverter foundation depths (which typically require minimal excavation). Vertical profiles will be associated with test boring locations only, and the locations of borings advanced during the preliminary geotechnical investigations will also be identified on maps included with the report. Areas designated for stockpiling of spoils and fill materials will be identified. If spoil materials will be temporarily stockpiled adjacent to access driveway, and trench locations, typical layouts will be provided.

(r) Suitability for Construction Evaluation

The Applicant will provide the information required by 1001.21(r).

(s) Vulnerability to Earthquake and Tsunami Events

As previously indicated, the Facility appears to have minimal vulnerability associated with seismic events based on review of publicly available data. Because the Facility is located approximately 13 miles from the nearest large waterbody (Lake Ontario), there is little to no vulnerability associated with tsunami events in western New York State[20].

[20] NOAA, 2018. Accessed at: https://www.ncdc.noaa.gov/stormevents/listevents.jsp?eventType=%28Z%29+Tsunami&beginDate_mm=04&beginDate_dd=01&beginDate_yyyy=1950&endDate_mm=04&endDate_dd=30&endDate_yyyy=2018&county=SUFFOLK%3A103&hailfilter=0.00&tornfilter=0&windfilter=000&sort=DT&submitbutton=Search&statefips=36%2CNEW+YORK

2.22 TERRESTRIAL ECOLOGY AND WETLANDS

The Application will evaluate the Facility's potential impact on ecological resources, including wildlife, associated wildlife habitats, and wetland communities. This evaluation will be based on the results of multiple targeted studies of existing ecological conditions within the Facility Site, to be developed in consultation with NYSDEC and other relevant agencies. Results from these studies will be supplemented by data gathered from existing databases, review of existing relevant conservation and planning documents, and consultation with NYSDEC staff, local experts and conservation groups. A comprehensive list of all ecological studies and analyses conducted, as well as any other sources of information that will be used to complete Exhibit 22 of the Application will be provided.

The Application will also include descriptions of measures undertaken by the Applicant to avoid, minimize, and mitigate identified significant impacts to ecological resources to the extent practicable. Such measures may include:

- Designing and constructing the Facility to minimize soil disturbance
- Siting Facility components to avoid areas with the highest habitat value
- Siting Facility components to avoid wetlands with the highest functions and values
- Utilizing mechanical methods to maintain vegetation under and around PV modules where possible
- Protecting and managing areas of valuable habitat (e.g. grassland) for sensitive species within the Facility Site
- Installation of pollinator habitat and native vegetation around PV modules

Based on preliminary field investigations and publicly available information gathered to date by the Applicant in support of this PSS, a summary description of ecological resources within the Facility Area (including land cover, plant communities, wildlife and wildlife habitat, and wetlands) is provided below.

Wildlife and Wildlife Habitat

The Application will present the results of multiple targeted studies of existing wildlife and wildlife habitat within the Facility Site, including breeding bird surveys, wintering raptor surveys, reptile and amphibian surveys, and surveys targeting rare or protected species that could occur in the area. Results from these studies will be supplemented by data gathered from existing databases, review of existing relevant conservation and planning documents, and consultation with NYSDEC staff, local experts and conservation groups. The Applicant has begun to conduct surveys of wildlife species that occur within the Facility Site; a winter raptor survey is currently under way using a work plan developed by the Applicant in coordination with NYSDEC, and a Wetland and Stream Delineation Report has been completed. Survey results will be reported in the Article 10 Application.

Land Cover and Plant Communities

The Facility Site is located in the Erie-Ontario Lowlands Ecoregion of New York State on relatively flat lands. Aside from the forested areas that occur along hedgerows and some areas of the Facility Site, much of the land has historically been used for agricultural purposes. The fields that remain in agricultural use are primarily planted with hay fields and row crops such as corn. Based on a preliminary field evaluation conducted by EDR biologists, the major land cover type within the Facility Site includes cropland. Other cover types comprise approximately 15% of the Facility Site and include forested land, successional old field, successional shrubland, disturbed/developed land, and freshwater wetlands. These cover types are associated with a variety of plant communities, which in turn provide habitat for wildlife.

Each plant community within the Facility Site represents potential habitat for a variety of wildlife species. The large quantity of open land in the Facility Site likely represents habitat for a diverse suite of avian species including sparrows, warblers, and flycatchers. In addition, these open areas are known to support raptor species that prey on small mammals. Data from wildlife and plant species inventories will be included within the Article 10 Application. The results of an invasive species survey will also be included in the Application.

PV modules are anticipated to be sited on approximately 650 acres of the Facility Site, with necessary components (such as ECS cables) connecting PV modules to the collection substation/POI substation. The remaining lands within the Facility Site will be undeveloped due to a combination of ecological resource avoidance, setbacks, and engineering constraints. In addition to avoiding wetlands to the greatest extent practicable, the Applicant intends to manage and develop on-site habitat within undeveloped areas of the Facility Site for the benefit of pollinator species. The Article 10 Application will include a comprehensive land management plan for the entire Facility Site, which will incorporate the findings and recommendations from all ecological studies and agency consultation conducted in support of the Application.

A detailed analysis of agricultural usage (past and present) within the Facility Site will be provided in the Article 10 Application. All impacts to agricultural land will be based on an impact analysis as described below in association with 1001.22(b), and mitigation is anticipated to generally follow the guidelines established by the New York State Department of Agriculture and Markets[21].

[21] New York State Department of Agricultural and Markets (NYSA&M). 2017. *Guidelines for Agricultural Mitigation for Solar Energy Projects*. https://www.agriculture.ny.gov/ap/agservices/Solar_Energy_Guidelines.pdf.

Threatened and Endangered Species

In order to assess the potential occurrence of federally-listed threatened and endangered species within the Facility Site, the Applicant has consulted with the state and federal agencies charged with protecting these species. According to the U.S. Fish and Wildlife Service (USFWS) IPaC system, the federally-threatened northern long-eared bat (*Myotis septentrionalis* or NLEB) may occur at the proposed Facility Site (see results in Appendix D). Review of an additional database maintained by the USFWS indicates that the closest known NLEB winter hibernaculum location is approximately 16 miles to the southeast of the Facility Site. Since the majority of Facility components will be sited in open areas, forest clearing is not anticipated. Therefore, no impacts to NLEB or its associated habitat are anticipated as a result of Facility construction and/or operation, based on the USFWS 4(d) rule for NLEB[22] or additional guidance from NYSDEC[23].

In addition to review of the IPaC system described above, a formal request for information regarding state-listed endangered and threatened species within the Facility Area was sent to the New York Natural Heritage Program (NYNHP) on May 3, 2018. The response received from the NYNHP on May 24, 2018, indicated that two bird species, the state-endangered short-eared owl (*Asio flammeus*) and the state-threatened northern harrier (*Circus cyaneus*) have been documented at various locations at or near the Facility Area (see correspondence in Appendix D). Further information regarding threatened and endangered species will be included with the Article 10 application. A description of each species listed by the NYNHP response letter is provided below.

Short-eared Owl

Short-eared owls are small to medium sized owls that prefer open areas such as grasslands, hayfields, fallow farm lands, and pastures. Short-eared owls detect prey by coursing open areas while flying low over the ground but have also been observed hunting from a perch. Their diet consists of small rodents, primarily voles, but can also include other small mammals and sometimes birds. Short-eared owls are found in New York State year-round, although their breeding range is limited to the St. Lawrence and Lake Champlain valleys, the Great Lakes Plains, and marshes along the south shore of Long Island. Breeding occurs between April and June. In New York, an increase in short-eared owl observations has been noted during the winter, as northern populations migrate south in search of food. Ecological communities associated with this species include cropland, dwarf shrub bog, high and low salt marsh, and successional old field. A limiting factor for short-eared owls is their dependency on rodent populations[24]. The NYNHP response letter

[22] USFWS. October 2018. *Northern Long-eared Bat Final 4(d) Rule.* Accessed at: https://www.fws.gov/midwest/endangered/mammals/nleb/4drule.html.
[23] NYSDEC. June 2018. *Protection of Northern Long-eared Bats.* Accessed at: https://www.dec.ny.gov/animals/106090.html#Change.
[24] New York Natural Heritage Program (NYNHP). 2015a. Online Conservation Guide for *Asio flammeus*. Available from: http://acris.nynhp.org/guide.php?id=6949.

indicates that short-eared owls have been observed at or adjacent to the Facility Site. Additional information on consultation with the NYSDEC and studies for this species conducted by the Applicant is provided below.

Northern Harrier

The northern harrier is a slim, medium-sized hawk with long broad wings, long legs and tail. Their diet consists of rodents and small birds. Northern harriers use a wide range of habitats including open grasslands, shrubland, and salt and freshwater marshes. Nests are built of grasses and sticks on the ground in grassland or marshes, usually in dense cover. Northern harriers are confirmed breeders in the western Great Lakes plain, open habitats of the Adirondacks, western Finger Lakes, Long Island, and the Hudson, St. Lawrence, and Lake Champlain valleys. Their winter range is similar, depending on prey abundance and snow cover. Associated ecological communities include agricultural land, successional old field, marshes, and successional shrubland[25]. The NYNHP response letter indicates that northern harriers have been observed at or adjacent to the Facility Site. Additional information on consultation with the NYSDEC and studies for this species conducted by the Applicant is provided below.

Wetlands

Formal wetland delineations within the Facility Site were conducted during the 2018 growing season. Wetland delineations were conducted in accordance with the three-parameter methodology described in the USACE *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: North Central and Northeastern* Region[26], and the methodology provided by the NYSDEC *Freshwater Wetlands Delineation Manual*[27]. In total, 26 freshwater wetlands and three streams were delineated within the Facility Site, totaling 84.8 acres and 14,886 linear feet, respectively. Wetlands and streams within the Facility Site were categorized as one of the following community types: emergent herbaceous wetland (PEM), shrub-scrub wetland (PSS), forested wetland (PFO), open water (OW), riverine upper perennial (R3), riverine intermittent (RR4), and riverine ephemeral (R6). Mapping of delineated wetlands and streams and a summary of results from the 2018 field effort are provided within Appendix E.

Review of NYSDEC mapping indicates that portions of one mapped forested freshwater wetland occurs within the Facility Site (see Appendix E). Wetlands A (PFO) and I (PFO) coincide with NYSDEC Mapped Wetland CB-2, which totals 68 regulated acres and is designated a Class 2 wetland. However, final determination of jurisdictional status must be made by the NYSDEC. In addition, two NYSDEC mapped streams occur within the Facility Site, listed in Table 1. Although both streams are designated Class C, neither stream is listed as protected by NYSDEC.

[25] NYNHP. 2015b. Online Conservation Guide for *Circus cyaneus*. Available from: http://acris.nynhp.org/guide.php?id=6812.
[26] USACE. 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: North central and Northeastern Region*.

Table 1. State-Mapped Streams Within the Study Area

Stream Name	NYSDEC Class	Linear Feet Within Facility Site[1]
Bull Creek	C	4,111
Unnamed tributary of Bull Creek	C	5,978

[1] Represents portion of stream within the Facility Site according to mapping from existing database.

The Application will discuss measures to be implemented to avoid, temporally limit, and mitigate wetland impacts. It is anticipated that direct impacts to wetlands/streams will be minimized by avoiding siting PV modules in wetlands where possible, and preferentially utilizing existing or narrow crossing locations. Additional measures may include special crossing techniques, equipment restrictions, herbicide use restrictions, and erosion and sedimentation control measures. Compensatory mitigation measures may be considered, depending on level of impacts anticipated.

Consistent with the requirements of 1001.22 of the Article 10 Regulations, Exhibit 22 of the Application will contain the following information:

(a) Existing Plant Communities

1001.22(a) shall include information on and a description of the plant communities within the Facility Site, and adjacent properties, including plant community mapping using GIS) software. Specific information on, and a detailed description of, all ecological communities identified within parcels that will host Facility components will be provided, as classified according to *Ecological Communities of New York State*[28]. A map, based on aerial photography, showing approximate locations and extent of identified plant communities, will be included.

(b) Impacts to Plant Communities

1001.22(b) shall include a characterization of impacts on plant communities from construction and operation. Proposed temporary and permanent impacts to plant communities, including permanent conversion of one cover type to another, shall be calculated for each community type. Discussion of such impacts will include:

- Specific assumptions associated with the approximate limit of vegetation clearing for each type of Facility component as identified in the Preliminary Design Drawings associated with Exhibit 11.
- A table of assumed area disturbance for each project component type, associated with Exhibit 11 as addressed above.

[28] Edinger, G.J., D.J. Evans, S. Gebauer, T.G. Howard, D.M. Hunt, and A.M. Olivero (editors). 2014. *Ecological Communities of New York State.* Second Edition. A revised and expanded edition of Carol Reschke's Ecological Communities of New York State. NYNHP, NYDEC, Albany, NY.

- Calculated using GIS software and presented in a summary impact table, the number of acres of each cover type impacted will be presented. Permanent impact calculations will include all tree clearing for construction and operation of the Facility.
- The plant community mapping referenced in 22(a) above will also depict vegetation cover types throughout the Facility Site in relation to proposed limits of vegetation disturbance and associated GIS shapefiles showing all areas of clearing and disturbance will be provided to NYSDEC. A discussion and evaluation of fragmentation to grasslands and forested habitat that may occur as a result of the construction of the Facility will also be included.

Invasive species will be addressed in the Article 10 Application.

(c) Avoidance, Minimization, and Mitigation of Impacts to Plant Communities

1001.22(c) shall include a detailed description of the proposed measures that will be implemented to avoid, minimize, and mitigate for any temporary and permanent impacts to existing, non-invasive plant communities, as a result of the construction, operation and maintenance of the Facility. In addition, appropriate post-construction vegetative restoration and management regimes, including reseeding disturbed areas with appropriate native seed mix or planting woody species, as necessary to recreate or enhance wildlife habitat, will be described.

(d) Existing Vegetation, Wildlife, and Wildlife Habitat

1001.22(d) shall include information on and a characterization of aquatic and terrestrial vegetation, wildlife, and wildlife habitats that occur within the Facility Site, encompassing all areas that may be disturbed for construction of modules, roads, electric collection, and other Facility components. Any unusual habitats or significant natural communities will be identified. On-site survey data and existing publicly available data (as outlined in the Article 10 regulations) will be used in the analysis.

1001.22(d) shall include information on and a characterization of aquatic and terrestrial vegetation, wildlife, and wildlife habitats that occur within the Facility Site, encompassing all areas that may be disturbed for construction of modules, roads, electric collection, interconnection, and other facility components, including:

1. Identification and description of plant communities, plant and wildlife species, and wildlife habitat. Such descriptions will include field identification 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 (SSC), 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).

2. Ecological cover type assessments and habitat assessments identified in 22(d)(1) above, will be classified according to *Ecological Communities of New York State*.
3. Identification and depiction of any designated unusual habitats or significant natural communities that could support federally or state-listed T&E species, SSC, or SGCN.
4. Provide a table of state and federally listed species occurring or likely to occur within the project including the following columns:
    i. Species name.
    ii. Federal status.
    iii. NYS status.
    iv. SGCN listing,
    v. Habitat preference identified according to *Ecological Communities of New York State*,
    vi. Identify maps from 1001.22(a)(3) that include habitat for each species.
    vii. Source of information indicating potential presence of species.
    viii. Indicate if species was observed onsite.
5. NHP database information will be used to identify the presence of any bat hibernacula. If hibernacula are identified within the Facility Site, or five miles from any Facility component or boundary (based on the consultations results with the USFWS and NHP), the location and distance to the nearest identified hibernacula will be provided separately and confidentially to NYSDEC and NYSDPS.
6. Information on amphibians and reptiles based the New York State Amphibians & Reptile Atlas Project (Herp Atlas), database records obtained from NYNHP, NYSDEC, and USFWS, assessments of suitable habitat in the Facility Area, and field surveys conducted on site.
7. Vernal pools will be inventoried at the time of wetland field delineations. The application will identify vernal pools located within 500 feet of the edge of disturbance of all Facility components, including forested areas potentially impacted by Facility construction. Vernal pools will be identified in accordance with the 2012 *Northeastern Regional Supplement to the Corps of Engineers Wetland Delineation Manual*[29]. To the extent that vernal pools are identified, the Applicant shall submit to NYSDEC detailed location maps and ecological characterization data for all identified vernal pools. The application will include an assessment of potential impacts to vernal pools (including the surrounding upland habitat).
8. Information on bird species that may be present or utilize the Facility at some point during the year based the following sources: existing data from NYNHP, NYSDEC, and USFWS; assessments of suitable habitat within the Facility; field observations made on-site during avian studies of the Facility Site; New

[29] USACE. 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: North central and Northeastern Region*.

York Breeding Bird Atlas (BBA); US Geological Survey Breeding Bird Survey (BBS); Christmas Bird Count (CBC); Hawk Migration Association of North America (HMANA); eBird; The Nature Conservancy surveys/reports; The Kingbird publication; reaching out to local birding groups (e.g. Buffalo Audubon Society, Buffalo Ornithological Society) (see 22(d)(5)) for information on recent and historical occurrences; and any other publicly available sources that may provide relevant information regarding bird occurrences within or in the vicinity of the Facility and interconnection line.

9. Description of potential impacts to calcareous shoreline outcrops and karst features, if present within or adjacent to the Facility, and any species that may utilize these habitats if final site design indicates there could be impacts to these ecological communities.
10. Shapefiles suitable for use in GIS software containing project components will be provided. In addition, shapefiles showing all wildlife and habitat survey locations as applicable and labeled by year will be included. Shapefiles will be considered business confidential and not shared outside of the agency staff involved in reviewing this project. Draft reports of all bird, habitat, and wetland surveys will be submitted to NYSDEC concurrent with, or prior to (if available) filing of the Application. These reports will include maps and shapefiles provided confidentially to NYSDEC depicting the location(s), observation date(s), species, and behavior(s) of all T&E and SSC individuals observed during pre-construction surveys and incidentally in the Facility.

(e) Wildlife Species List

The Applicant will provide the information required by 1001.22(e), based on the information obtained in support of subpart (d) above. A plant and wildlife species inventory will also be included based on existing data available from the NYNHP, NYSDEC staff, USFWS, Herp Atlas, BBA, HMANA, CBC, eBird, The Nature Conservancy surveys/reports, the Kingbird publication, local experts, on-site surveys, and any other publicly available source that may provide relevant information regarding wildlife occurrences within or in the vicinity of the Facility. The inventory will include the typical species of birds, mammals, herpetofauna, and terrestrial invertebrates found in the region and likely to occur within or in the vicinity of Facility. On-site field surveys (e.g., avian surveys, 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 or in the vicinity of the Facility at some time during the year. The inventory 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) Analysis of Impacts from Construction and Operation

1001.22(f) shall contain:

1. A summary narrative and associated mapping to explain and illustrate:
    i. Potential and expected construction and operational impacts to vegetative cover types.
    ii. Wildlife habitats and the species that they support (including a discussion of impacts from habitat fragmentation).
    iii. Wildlife concentration areas including Winter Raptor Concentration Areas.
    iv. Travel corridors, if identified.
    v. Terrestrial organisms identified during pre-construction field studies in relation to the proposed limits of disturbance.
2. A discussion of any direct and indirect construction-related impacts that may occur to wildlife and wildlife habitat, including but not limited to:
    i. incidental injury and mortality due to construction activity vehicular movement.
    ii. habitat disturbance and loss associated with clearing and earth-moving activities.
    iii. the indirect impacts resulting from displacement of wildlife.
3. A discussion of potential direct and indirect operational and maintenance impacts including but not limited to:
    i. Loss of habitat
    ii. Forest and grassland fragmentation.
    iii. Wildlife displacement.
    iv. Avian collisions.
    v. Bat collisions.
    vi. To the extent any documented wildlife travel corridors or concentration areas are identified within or adjacent to the Facility Site, direct and indirect impacts to such corridors and concentration areas will be addressed.
4. 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.
5. A summary impact table quantifying anticipated temporary and permanent impacts associated with all Facility components in relation to wildlife habitats, identified concentration areas or travel corridors (to the extent data associated with such areas or corridors are readily available or provided to the Applicant by NYSDEC personnel), and vegetation cover types classified according to *Ecological Communities of New York State*[30], such as grasslands, young successional forests and interior forests, if affected.

[30] Edinger, G.J., D.J. Evans, S. Gebauer, T.G. Howard, D.M. Hunt, and A.M. Olivero (editors). 2014. *Ecological Communities of New York State.* Second Edition. A revised and expanded edition of Carol Reschke's Ecological Communities of New York State. New York Natural Heritage Program, New York State Department of Environmental Conservation, Albany, NY.

6. Information regarding the planned installation of pollinator habitat throughout the Facility Site to promote the sustainability of pollinator populations in the region, and the potential benefit of this habitat type on other wildlife and insect species.
7. A wildlife and habitat impact analysis including an identification, evaluation, and assessment of direct and indirect Facility-related impacts to wildlife species, particularly: federally and state-listed T&E species and their habitats; wildlife concentration areas; migration corridors; and forest and grassland habitats. The NYSDEC Region 9 Wildlife Office will be contacted to obtain the most recent breeding, wintering, and habitat data for state-listed species. The USFWS Field Office in Cortland, New York will be contacted to obtain the most recent breeding, wintering and habitat data for federally listed and protected species.
8. Draft copies of all wildlife survey reports planned for the Facility or requested by state or federal agencies, based on work plans developed with the agencies, will be submitted concurrent with, or prior to (if available) filing of the Application, including any associated maps and shapefiles. The Applicant has initiated winter raptor surveys in coordination with NYSDEC and will also be conducting breeding bird surveys to be completed in 2019.
9. To the extent that pre- and post-construction wildlife survey data are available for other utility-scale solar facilities in New York State, avian occupancy and usage of the Facility Site will be compared with these data.
10. A cumulative impact analysis will be conducted to evaluate the expected impacts from the construction, operation and maintenance of the Facility as they relate to other known proposed and operating solar energy projects nearby the Facility and in the state. This analysis will minimally include a discussion and calculations describing and showing:
    i. examination of data on currently installed or proposed utility-scale solar energy capacity in the state, where available;
    ii. estimated take of federally listed or protected and state-listed species at the Facility, based on data provided by state and federal agencies, and any other available relevant information;
    iii. acres of each habitat type lost directly through installation of modules and other project components, clearing, and cover type conversion;
    iv. acres of each habitat type lost indirectly due to functional loss/degradation of habitat (for purposes of forest fragmentation analyses, it is assumed that indirect effects will extend up to 300 feet beyond the limits of disturbance); and
    v. cumulative impacts of forest and grassland habitat fragmentation, particularly potential impacts on listed bird species.

11. A literature review and impact analysis evaluating how the construction, operation and maintenance of the Facility will affect wintering and breeding grassland bird species, including an assessment of the potential population-level effects of habitat loss is likely to have on grassland bird species at a regional scale, will also be included.
12. Information regarding the presence of federally- and state-listed T&E species, SSC, rare species, and SGCN:
    i. A discussion of the Facility's potential to impact such species or their habitats based on database records obtained from the NYNHP, 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.
    ii. The presence of Facility components in occupied habitat of listed T&E species may constitute take, pursuant to 6 NYCRR Section 182.11 (Part 182), of individuals or the habitat they depend on, or both. If it is determined by the Applicant, or NYSDEC that construction or operation of the Facility is likely to result in a take of a listed species, including the adverse 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, including proposed actions to first avoid all impacts to listed species. If it is determined that adverse impacts are unavoidable and would result in a take under Part 182, the Application will demonstrate this and describe why complete avoidance of impacts to each affected species is not feasible, along with proposed actions to minimize impacts to the maximum extent practicable, and proposed mitigation and adaptive management actions. The minimization actions and mitigation measures to be implemented will: be developed in consultation with NYSDEC and USFWS (if federally-listed species may be impacted); result in a net conservation benefit to the target species; and require thorough post-construction monitoring that adequately measures the Facility's impact on the target species. If it is determined that adverse impacts are unavoidable and would result in a take under Part 182, the Application will describe the process of developing a post-construction monitoring plan on a site-specific basis through discussions between NYSDEC, the Applicant, and USFWS (if federally-listed species may be impacted), which would be finalized prior to the start of project operation, and at a minimum specify the following: the expected and allowed level of take of each target species; survey monitoring methods, effort, duration, data reporting and compliance documentation; construction parameters; proposed adaptive management responses, if

applicable, and; mitigation measures sufficient to ensure the Applicant complies with the substantive requirements of Part 182. All information and material described in section 22(f), including all associated attachments and appendixes, will be provided to NYSDEC in full and un-redacted at the time the Application is submitted.

(g) Avoidance, Minimization, and Mitigation of Impacts to Wildlife Species

1001.22(g) shall include a description of the impact avoidance and minimization efforts used in developing the Facility, as they pertain to vegetation, wildlife, and wildlife habitat. The Facility design, construction controls, and operational measures that can be reasonably implemented to first avoid, then minimize and mitigate for impacts to wildlife and wildlife habitat as a result of the construction, operation and maintenance of the Facility Site will be described.

(h) Wind Powered Facilities

As the Applicant is proposing a solar powered facility, the requirements of 1001.22(h) do not apply.

(i) Wetland Delineation and Mapping

The Applicant will provide the information required by 1001.22(i) in the Article 10 Application. Figures portraying the mapped and delineated wetlands will be presented. A Wetland and Stream Delineation Report has been completed based on field surveys and delineation of wetlands within the Facility Site and will be submitted with the Application.

(j) Descriptions of Delineated Wetlands

The Applicant agrees to provide the information required by 1001.22(j), including a description of the characteristics and Cowardin classification of all federally, state, and locally regulated delineated wetland communities, a summary of the field data collected regarding vegetation, soils, and hydrology and copies of all Wetland Determination Data Forms will be compiled into a Wetland and Stream Delineation Report and appended to the Application.

(k) Wetland Functional Assessment

1001.22(k) shall contain a table of qualitative and descriptive wetland functional assessment, including seasonal variations, for all delineated wetlands. Qualitative scores that assess functions and values for each delineated wetland 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. The functions/values evaluated using this method will include:

2) Groundwater recharge/discharge;
3) Flood-flow alteration;
4) Fish and shellfish habitat;
5) Sediment/toxicant/pathogen retention;
6) Nutrient removal;
7) Production export;
8) Sediment/shoreline stabilization;
9) Wildlife habitat;
10) Recreation;
11) Education/scientific value;
12) Uniqueness/heritage
13) Visual quality/aesthetics;
14) Protected, threatened or endangered species habitat.

(l) Analysis of Offsite Wetlands

The Applicant will provide an offsite wetland evaluation as required by 1001.22(l). Wetland boundaries within the Facility Site will be field delineated. This information will be used to inform an analysis and description of hydrological connections of all wetlands within the Facility to offsite wetlands, including those that are anticipated to fall under NYSDEC jurisdiction (under Article 24 of the ECL) and USACE jurisdiction (under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act). Assessments of potential state wetland jurisdiction will include both "mapped" and "unmapped wetlands" that meet NYSDEC's 12.4-acre size threshold (including any wetlands of any size separated by less than 50 meters which function as a unit in providing wetland benefits, pursuant to 6 NYCRR Part 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)). A summary will be provided of off-site wetlands adjacent to the Facility and any disturbed areas that may be hydrologically or ecologically influenced or impacted by development of the Facility, including Significant Coastal Fish and Wildlife Habitat Areas designated by NYS Department of State (NYSDOS), and public lands, to determine their general characteristics and relationship, if any, to the delineated wetlands within the Facility. Maps and shapefiles of field-delineated wetlands will be provided to NYSDEC Region 9 staff. The Applicant is working to coordinate a site visit with NYSDEC staff to determine the jurisdiction status of wetlands within the Facility Site.

(m) Identification of Temporary and Permanent Impacts to Wetlands

1001.22(m) shall include an identification and quantification of temporary and permanent impacts to wetlands, including any regulated adjacent areas. An identification of temporary and permanent impacts to field delineated wetlands (and all state-regulated 100-foot adjacent areas) based on the proposed footprint of all Facility components and associated impact assumptions. This assessment will also include a description of applicable permanent wetland forest conversion, if any, which would occur as a result of the construction or maintenance of the Facility. Such impacts will be summarized and presented in a table that identifies and calculates the following:

i. the acreage and type of impact, including but not limited to permanent or temporary fill and forest conversion, to each wetland and adjacent area, including vegetative cover type affected by each impact;
ii. associated crossing methodology for each wetland, clearly discerning between federal and state wetlands, and adjacent area impacts;
iii. wetland delineation types (i.e. field survey, review of aerial imagery, roadside observation, etc.);
iv. Applicant-assigned wetland identification code, NYSDEC wetland identification number, and NYSDEC stream classification; and
v. the corresponding reference to the respective sheet of the preliminary design drawings depicting the resource, and on the mapping required by the subsequent item.

Impacts to wetlands will also be presented on a separate set of drawings at 1":50 scale, showing wetland boundaries, permanent and temporary structures, stream crossings, roads, power interconnects, grade changes, and the limits of disturbance.

(n) Avoidance, Minimization, and Mitigation of Impacts to Wetlands

1001.2(n) shall include a general discussion of all avoidance and minimization measures considered, and description of methods to be implemented to avoid and mitigate wetland impacts. Where impacts are unavoidable, and have been minimized to the greatest extent possible, the anticipated mitigation measures to be implemented to offset impacts to wetlands and all state-regulated 100-foot adjacent areas will be discussed. Pursuant to 6 NYCRR 663.5(g), a conceptual mitigation plan for impacts to state-regulated wetlands and adjacent areas must be included in the Application and at a minimum must meet the following provisions:

1. The mitigation must occur on or in the immediate vicinity of the Facility (preferably elsewhere in the same wetland);
2. The area affected by the proposed mitigation must be regulated by the Freshwater Wetlands Act and 6 NYCRR Part 663 after mitigation measures are completed, and;

3. The mitigation must provide substantially the same or more benefits than will be lost through the proposed activity.

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, and the duties of the Environmental Monitor will be described. The ECMP will clearly describe the locations of all staging areas, temporary spoil or woody debris stockpiles, "extra work" areas, and other places material or equipment may be placed on site. The limits of disturbance around all such areas will be clearly defined in plan maps, and physically marked in the field using orange construction fencing or other similar indicators. Plans to restore all temporary disturbances in regulated areas, including replanting trees in temporarily disturbed forested areas, will be provided.

(o) Identification of State and Federal Threatened and Endangered Species

An identification of New York State and Federally listed T&E species documented within or adjacent to the Facility area, along with a discussion of all potential direct and indirect impacts to these species, and the detailed contents of an Endangered Species Avoidance, Minimization and Mitigation Plan, if needed, that demonstrates net conservation benefit to the affected listed species, will be provided in Exhibit 22(f). The results of pre-construction surveys and the associated impact analysis, as well as the estimated direct and indirect take of listed species and their habitats will provide a basis for ongoing consultation with NYSDEC, NYSDPS, and USFWS (if necessary) to determine an appropriate post-construction monitoring protocol.

(p) Invasive Species Prevention and Management Plan

The Applicant will provide the information required by 1001.22(p). Invasive Species Identification will include:

- A list of all non-native invasive species observed during site-specific field investigations, incidentally while on site for other purposes, and/or and known to occur within the Facility. The list, maps, and shapefiles (as points or polygons, depending on the amount of area covered) of non-native invasive plant species in areas of proposed disturbance shall be based on a qualitative field survey. The methods utilized, and results of the survey will be summarized in a baseline invasive species report to be included with the Application.
- For each invasive species identify an area and concentration threshold that requires mapping and an individual treatment plan.

An Invasive Species Prevention and Management Plan that addresses the plant species listed in 6 NYCRR Part 575 will be included in the Application. For the purposes of the entirety of Exhibit 22, unless otherwise specifically noted, "invasive species" is defined as all terrestrial and aquatic species listed at: http://www.dec.ny.gov/docs/lands_forests_pdf/islist.pdf. Additional invasive species not included on this list (e.g. reed canary grass and wild parsnip) may also warrant specific management and control measures, depending on current populations of such species within the Facility Site. The Invasive Species Prevention and Management Plan will apply to all prohibited and regulated invasive species and include:

i. A summary of the survey methods used to identify and mark existing non-native invasive species, survey results (i.e. baseline survey), and a description of how these results will be verified prior to construction.
ii. An action plan for pre-construction management of non-native invasive species, including threshold(s) for action. Specific methods the Applicant will use to ensure that packing material, imported fill and fill leaving the Facility site will be free of non-native invasive species material, seeds, and parts to the extent practicable;
iii. A specification on how fill material brought to and placed in the Facility site will be free of non-native invasive species material, seeds, and parts, by source inspection or other method, or describe how fill brought to the Facility will not be used in areas free of invasive species;
iv. A detailed description of the specific measures to be taken to prevent the introduction, proliferation and spread of all non-native invasive species due to implementation of the Facility's grading and erosion and sediment control plan;
v. Details of procedures for preventing the spread of invasive invertebrates and diseases such as the emerald ash borer and hemlock woolly adelgid, based on standard protocols and/or guidance provided by the DEC and DAM, and a discussion of how the Applicant will comply with the state quarantine and protective zones, where applicable;
vi. Detailed plans describing how appropriate measures will be implemented to ensure that equipment and personnel arrive at and depart from the Facility Site free of all non-native invasive species material, seeds, and parts. The protocol for inspection of equipment arriving at the Facility Site will be provided in the Application.
vii. A detailed description of procedures for removing non-native invasive species material, seeds, and parts from equipment and personnel, and proper disposal of materials known to be or suspected of being infested;
viii. A detailed description of the Best Management Practices or procedures that will be implemented, and the measures that will be used to educate workers;

ix. A detailed description of a proposed post-construction monitoring and corrective action plan, to achieve the goal of no new invasive species in those areas disturbed by project construction and no new locations of existing invasive species in the Facility Site, based on the results of the baseline survey, and survey measures and procedures for revising the Invasive Species Prevention and Management Plan in the event that the established goals are not met within a specified timeframe;

x. Anticipated mechanical and/or chemical methods and procedures used to treat non-native invasive species that have been introduced or spread as a result of the construction, operation or maintenance of the Facility (based on comparisons against the baseline survey); and

xi. Landscape re-vegetation plans, including specification of appropriate native wildlife flower or grass seed mix to be used, as appropriate.

(q) Evaluation of Impacts to Agricultural Resources

1001.2(q) shall contain an evaluation of temporary and permanent impacts to agricultural resources as a result of Facility construction and operation including:

i. A quantification and analysis of temporary and permanent impacts to agricultural land based on the proposed footprint of all Facility components and associated limits of disturbance during construction. To minimize impacts to active agricultural land, the Applicant plans to coordinate with NYSDAM. A discussion of potential mitigation, following the most recent edition of guidance documents issued by NYSDAM. As described in Stipulation 4, the Applicant will also include a discussion of historical trends in land use (with a specific focus on conversion of farmland) over the last 20 years within a five-mile radius of the Facility. This will include a discussion of the Facility's potential effect on the availability of farmland within five miles.

ii. A map of the Facility Site showing locations of prime farmland, prime farmland if drained, unique farmland, and farmland of state and local importance, will be provided in Exhibit 21.

iii. Discussion of methods for identifying drainage tile lines prior to construction, along with restoration of tile lines impacted by Facility construction activities in areas where lands will be returned to agricultural use following decommissioning.

iv. A discussion of current agricultural use and productivity within the Facility Site, including information gained from interaction with the NYSDAM and local farmers.

v. Description of appropriate measures that avoid or minimize permanent impacts to the agricultural viability of soils and lands within the Facility Site.

2.23 WATER RESOURCES AND AQUATIC ECOLOGY

Exhibit 23 of the Article 10 Application will include a study of the groundwater, surface water, and aquatic ecology present within the Facility Site. The Application will include an identification and mapping of existing conditions, an impact analysis, and proposed impact avoidance and mitigation measures.

Ground Water

Based on preliminary evaluations conducted in support of this PSS, depth to groundwater and depth to bedrock ranges from the ground surface to greater than 6.5 feet throughout the Facility Site[31]. Based on preliminary evaluations, the Facility Site does not border or contain any part of a primary aquifer, a designation applied by USGS and NYSDEC to aquifers that are highly productive and utilized for municipal water supply systems[32].

The Facility is not anticipated to result in any significant impacts to groundwater quality or quantity of drinking water supplies or aquifer protection zones. Excavations for the substation and POI substation foundations, roadways, and any underground collection lines are expected to be relatively shallow and are not anticipated to intercept groundwater within the surrounding aquifers. The Facility will add only small areas of impervious surface (anticipated to be for gravel roadways as defined by NYSDEC, inverter pads, and the substation), which will be dispersed throughout the Facility Site, and will be equipped with appropriate stormwater management measures, resulting in what is expected to be a negligible effect on groundwater recharge. The Applicant is consulting with NYSDEC on the possibility of installing pervious access roads to reduce impervious surface. Additional detail regarding groundwater impacts will be provided in the Article 10 Application, including results from a geotechnical evaluation, as well as specific avoidance, minimization, and mitigation measures that will be implemented to protect groundwater resources during construction of the Facility.

Private wells will be identified through communication with landowners and business owners of parcels located within a 2,000-foot radius of the proposed Facility. The Application will include a discussion of the impacts, if any, on private water sources. A map of private well locations within the Facility Site will be submitted under separate confidential cover. The Applicant cannot guarantee that this will be a complete set of information as responses from some landowners may not be received. A Public Notification and Complaint Resolution Plan will be presented with the Application.

[31] Web Soil Survey, 2018. Available at: https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm.

[32] NYSDEC. 2011. *Primary Aquifers – 1:24,000 – NYS.* Division of Water, Bureau of Water Resources. GIS Dataset. Available at: http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1232.

Surface Water

The Facility Area is located primarily in the Niagara river basin, with surface water draining from the Niagara Watershed into Tonawanda Creek, linking with the Niagara River, and ultimately emptying into Lake Ontario.

The Article 10 Application will identify the classification for all NYSDEC mapped streams within the Facility Site. Characteristics of the streams in the Facility Site will be described in the Article 10 Application, based on publicly available data and when available, supplemented by field data collected during on-site wetland and stream delineations. A Wetland and Stream Delineation Report will be included with the Application and will further describe delineated streams.

The Article 10 Application will identify the surface drinking water intake sites identified through correspondence with local municipalities and NYSDOH, and discuss the type, nature, and extent of services provided by each source based on the information received.

Based on the Facility layout (i.e., proposed footprint of all Facility components) and the delineated stream and wetland boundaries, GIS calculations will be performed to determine the approximate acreage of surface waters that may be temporarily and permanently impacted. Maps of surface waters delineated within the Facility Site will be presented with the Application and the Wetland and Stream Delineation Report. The Article 10 Application will also address potential Facility-related impacts, if any, to drinking water supplies.

Facility components will be sited to avoid or minimize both temporary and permanent impacts to surface waters to the extent practicable. Impacts due to access driveway and collection line crossings will be minimized by utilizing existing crossings and narrow crossing locations to the extent practicable. During construction, potential direct or indirect impacts to surface waters may occur due to the installation of the Facility, the upgrade of local public roads, the installation of above ground or buried electrical interconnects, and creation of temporary workspaces around the substation. Impact mitigation and avoidance to surface waters will be addressed. The discussion will include an evaluation of reasonable alternatives that may entirely avoid impacts to regulated waterbodies.

Environmental impacts to be discussed and addressed will include:

- Thermal changes to waterbodies due to vegetative clearing;
- Changes to in-stream structure, morphology and stability;
- Potential impacts to or taking of State-listed T&E species, SSC, SGCN, and the effects of turbidity on nearby habitat; and
- Impacts of (potentially contaminated) sediment resuspension/dispersion.

Where crossings of surface waters are required, BMP's will be utilized, as required by the NYSDEC and the USACE. Specific mitigation measures for protecting surface water resources will be described in the Article 10 Application, and may include but are not limited to the following:

- No Equipment Access Areas: Except where crossed by permitted access driveways or through non-jurisdictional use of temporary matting, streams will be designated "No Equipment Access," thus prohibiting the use of motorized equipment in these areas.
- Restricted Activities Area: A buffer zone of 100 feet, referred to as "Restricted Activities Area", will be established where Facility construction traverses streams, wetlands and other bodies of water.
- Sediment and Siltation Control: An erosion and sedimentation control plan will be developed and implemented as part of the SPDES General Permit for the Facility. Specific control measures will be identified in the Facility SWPPP, and the location of these features will be indicated on construction drawings and reviewed by the contractor and other appropriate parties prior to construction.

Potential source(s) of and collection systems for water for construction period uses, including for concrete batch plant (if necessary), invasive species wash station(s), fire control, and other uses will be provided. For any HDD installations, an Inadvertent Return Plan shall be developed to address any inadvertent releases.

Stormwater

Prior to construction, the Applicant will seek coverage under the NYSDEC SPDES General Permit (GP-0-15-002 or most current) with a Notice of Intent for Stormwater Discharges from Construction Activity. The Article 10 Application will include a preliminary SWPPP, which will be prepared consistent with the SPDES General permit and will describe in general terms the erosion and sediment control practices that will likely be implemented during construction activities, and the post-construction stormwater management practices that will be used to treat water quality and quantity of stormwater discharges.

The Preliminary SWPPP identified above will be prepared in accordance with the New York State Standards and Specifications for Erosion and Sediment Control Standards (NYS Standards) and the New York State Stormwater Management Design Manual and will identify practices for managing stormwater runoff post-construction. Specifications for any culverts required for the construction of access roads or improvements to existing roads will be designed to meet 100-year storm event requirements. Further detail will be provided in the Application.

Chemical and Petroleum Bulk Storage

The Article 10 Application will describe the Best Management Practices to be implemented during construction to prevent and contain spills. In addition, the Article 10 Application will contain a Preliminary SPCC Plan that will be implemented during Facility operation to minimize the potential for unintended releases of petroleum and other hazardous chemicals. This plan is anticipated to contain information about water bodies to be included in the final SPCC, procedures for loading and unloading transfers of oil, discharge or drainage controls, procedures in the event of discharge discovery, a discharge response procedure, a list of spill response equipment to be maintained on-site), methods of disposal of contaminated materials in the event of a discharge, and spill reporting information.

It is not anticipated that the Facility will require on-site storage or disposal of large volumes of any substances subject to regulation under the State of New York's chemical and petroleum bulk storage programs (e.g. fuel oil, petroleum, etc.), or applicable local laws. If construction, operational, or maintenance activities at the Facility require petroleum or other hazardous chemicals be stored on site, the Application will identify such substances and demonstrate compliance with State and local laws, regulations and guidelines. This will be confirmed in the Article 10 Application.

Aquatic and Invasive Species

The Article 10 Application and the Wetland and Stream Delineation Report will contain the results of the on-site wetland and stream delineation field effort, which will inform the siting of various Facility components, to help further minimize impacts to surface waters, as practicable. Based on the Facility layout and the delineated stream and wetland boundaries, calculations will be performed to determine the anticipated acreage of surface waters to be temporarily and permanently impacted. The identification of surface waters to be impacted will allow for an analysis of potential impacts on biological aquatic resources, including any listed endangered, threatened, or special concern species that may occupy potentially affected waters. The Application will include an identification and evaluation of reasonable avoidance measures and, where impacts are unavoidable, mitigation measures regarding impacts on such biological aquatic resources, including native species and invasive species impacts (if any) and assure compliance with applicable water quality standards. No specific surveys to identify the presence of invasive aquatic species at the Facility Site are planned at this time. However, an Invasive Species Control Plan to recognize, manage, and mitigate the presence of exotic invasive species will be included with the Application.

Cooling Water

The proposed Facility does not involve the use of cooling water, and as such, the requirements of this section are not applicable to this Facility. Therefore, information related to cooling water systems, intake, and discharge will not be included in the Article 10 Application.

Consistent with the requirements of 1001.23 of the Article 10 Regulations, the Applicant will provide the following information required by 1001.23(a)-(f).

(a) Groundwater

1) Maps showing depth to bedrock, depth to water table, and karst features throughout the Facility Site, based on the Soil Survey of Niagara County, New York.
2) Information on groundwater aquifers and recharge areas including:
    i. Maps based on publicly available water well information based on the following sources: data requested from the New York State Department of Health Records Access Officer, the NYSDEC, USGS Office of Groundwater, USDA Soil Conservation Service, USDA NRCS Web Soil Survey, the Niagara County District office, and other local municipalities, as well as data collected during subsurface investigations in the Facility Site.
    ii. A discussion on groundwater quality, the location, depth, yield, and use of identified public and private ground water wells, and the location of well head and aquifer protection zones within one mile of the Facility Site.
    iii. The Applicant will conduct a private well survey within a 2,000-foot radius of the Facility Site. The Application will include a list of private wells, identified through the Applicant's survey. The survey will solicit well construction details, usage patterns, and water quality data, as well as include educational information describing the Facility and the Article 10 process, ways to contact Facility personnel, a link to the Applicant's website, and methods by which survey recipients can be added to the stakeholder list.
3) An analysis and evaluation of potential ground water impacts (during normal and drought conditions) from the construction and operation of the Facility on drinking water supplies, and groundwater quality and quantity within 1 mile of the Facility Site. This will include the following:
    i. Data collected regarding the nature and extent of existing groundwater contamination within the Facility Site obtained from the well survey and publicly available data, including potential impacts to known public and private water supplies, groundwater aquifers, wellheads, and aquifer protection zones.
    ii. Plans for notification and complaint resolution during construction of the Facility based upon the results of the impact analysis, as needed.
    iii. Information on anticipated areas of potential dewatering during construction and operation of the Facility, based on publicly available databases, the results of the well survey, and geotechnical borings conducted at select locations within the Facility Site. A proposed method of dewatering (where needed) will be described in the Application.

iv. A general discussion of likely sources of water for concrete mixing operations (if needed). Details associated with the design and layout of facilities for withdrawal and transport of source water will be provided post-Certification once the Applicant engages a BOP contractor.

(b) Surface Waters

1) A map, at a scale that supports legibility, identifying all surface waters, including intermittent and ephemeral streams, using data from NYSDEC, ESRI, USGS, National Wetlands Inventory, and stream data collected during the on-site surveys of water resources within 500 feet from the edge of disturbance from all proposed Facility components.

2) For each waterbody, a description of New York State listed Water Classification and Standards pursuant to 6 NYCRR Part 800-941 and including part numbers, Water Index Numbers (WIN), physical water quality parameters, flow rate, biological aquatic resource characteristics (including incidentally observed species of vertebrates and invertebrates [if any], habitat, and presence of invasive aquatic species), and other characteristics of such surface waters, including intermittent streams, in the Facility Site using publicly available data, and when necessary, supplemented by field data collected during wetland and stream delineations or information provided by NYSDEC. Aquatic invasive species as identified by NYSDEC[33], which are observed while conducting delineations and field investigations, will be documented and included in the Application. Invasive species are further addressed in Exhibit 22 (Terrestrial Ecology and Wetlands).

3) An identification of all downstream surface water drinking intakes within 1 mile of the Facility and contained within the drainage basin in which the Facility is located, or if none are located within 1 mile, the nearest downstream surface water drinking supply intake. Location(s) of the intakes will be given by longitude and latitude. A discussion of potential impacts to drinking water supplies due to the Facility or onsite non-Article VII interconnections will include characterization of the type, nature, and extent of service provided from the identified source, will be included.

4) A narrative discussion will be provided that describes all potential impacts to surface water resources, including streams and lakes. A calculation of the approximate acreage and linear distance of surface waters that would be temporarily or permanently impacted based on the proposed Facility footprint and associated impact assumptions, and field delineated stream boundaries. Such impacts will be presented in a table that:

   i. Identifies the stream name and classification;

   ii. Identifies the extent and type of impact and associated crossing methodology (e.g., buried collection, crossing in dry conditions, HDD, access road); and

   iii. Describes the proposed avoidance and impact minimization measures.

[33] http://www.dec.ny.gov/docs/lands_forests_pdf/islist.pdf

A map of all anticipated HDD locations in relation to surface water resources will also be included. A statement that BMPs and guidelines for crossing streams regulated under Article 15 will be developed in consultation with NYSDEC and NYSDPS.

5) The Application will identify and evaluate reasonable avoidance measures and Facility layout alternatives. This will include an evaluation of reasonable alternatives that may entirely avoid impacts to regulated waterbodies. Where impacts are unavoidable and have been minimized to the greatest extent possible, mitigation measures will be proposed for groundwater and surface water impacts. The Application will propose work prohibition dates associated with crossings of State-protected streams under ECL Article 15. The Application will also address conformance with NYSDEC stream crossing guidelines[34].

(c) Stormwater

1) Prior to construction, the Applicant will file a Notice of Intent to seek coverage under the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity, issued in January 2015 and effective on January 29, 2015 (modified July 15, 2015). This authorization is subject to review by NYSDEC and is independent of the Article 10 process. However, the Article 10 Application will include a preliminary SWPPP, which will be prepared consistent with the SPDES General permit and will describe in general terms the erosion and sediment control practices that will likely be implemented during construction activities, and the post-construction stormwater management practices that will be used to treat water quality and quantity and reduce pollutants in stormwater discharges after Facility construction has been completed. The Preliminary SWPPP will include:

   i. An introduction that will review the proposed Facility, and the purpose, need, and appropriate contents of the complete SWPPP;
   ii. Anticipated stormwater management practices, including temporary and permanent erosion and sediment control measures (vegetative and structural), and post-construction practices;
   iii. Anticipated construction activities, including a preliminary construction phasing schedule and definition of disturbance areas;
   iv. Site waste management and spill control measures;
   v. Proposed site inspection and maintenance measures, including construction site inspection, and construction site record keeping; and
   vi. Conditions what will allow for the termination of permit coverage.

[34] NYSDEC, 2011. Accessed At: http://www.dec.ny.gov/permits/49060.html

2) The preliminary SWPPP will be prepared in accordance with the New York State Standards and Specifications for Erosion and Sediment Control Standards (NYS Standards) and the New York State Stormwater Management Design Manual, and will include typical information on permanent, post-construction erosion and sediment control measures (vegetative and structural), along with the anticipated stormwater management practices that will be used to reduce the rate and volume of stormwater runoff after construction has been completed. However, the preliminary SWPPP will not include pre- or post-construction stormwater runoff calculations.

(d) Chemical and Petroleum Bulk Storage

1) A description of the preliminary SPCC Plan that will be in place for small volumes of chemical, petroleum, or hazardous substances that may be stored on site. Spill containment requirements for electric transformers at the substation and PV module sites will be provided.
2) The Applicant agrees to provide the information required by 1001.23(d)(2). It is not anticipated that the Facility will require on-site storage or disposal of large volumes of any substances subject to regulation under the State of New York's chemical and petroleum bulk storage programs (e.g. fuel oil, petroleum, etc.).
   If construction, operation, or maintenance activities at the Facility require petroleum or other hazardous chemicals be stored on site the Application will identify such substances and demonstrate compliance with State laws, regulations, and guidelines.

(e) Aquatic Species and Invasive Species

1) A discussion and analysis of the impact the construction and operation of the Facility is likely to have on critical and sensitive biological aquatic resources, including species listed as endangered, threatened, or species of special concern in 6 NYCRR Part 182, as well as SGCN, that are known of suspected of being present within the Facility. The analysis will include a discussion of the potential for introducing and/or spreading invasive species within those areas disturbed by construction. The presence of invasive species within the Facility Site will be documented during wetland and stream delineations and other on-site investigations, as described in Section 2.22. However, no species-specific surveys for invasive aquatic species are planned.
2) The Applicant agrees to provide the information required by 1001.23(e)(2). This will include a discussion of measures to avoid or minimize direct impacts to federally and state-listed and protected aquatic species such as through appropriate and effective Facility component siting. A proposal to mitigate in an appropriate and timely manner, for unavoidable estimated direct impacts to federal or state T&E listed species will also be discussed, and cross referenced with Exhibit 22(g) if applicable. Construction activities and the presence of Facility components in occupied habitat of listed T&E aquatic species may constitute take of individuals or the habitat they depend on, or both. A proposal to mitigate, in an appropriate and timely manner for unavoidable

estimated direct impacts to federal or state T&E listed aquatic species will also be discussed. Measures to avoid or minimize and mitigate impacts to vegetation will be addressed. 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 listed aquatic species at all alternative sited and the proposed Facility location.

(f) Cooling Water

The Facility will not require cooling water, and therefore cooling water withdrawals will not be addressed in the Application.

2.24 VISUAL IMPACTS

The Application will evaluate potential short and long-term visual impacts that would result from introducing the Facility into the landscape. This evaluation will be presented in a Visual Impact Assessment (VIA) report, which will assess the extent and significance of Facility visibility. The components of the VIA will include identification of visually sensitive resources, viewshed mapping, confirmatory visual assessment fieldwork, visual simulations (photographic overlays), establishment of landscape similarity zones, and proposed visual impact mitigation.

PV module visibility is anticipated to be relatively limited as the PV modules and inverter equipment are not expected to extend more than 12 feet above grade and the surrounding hedgerows and buildings within and adjacent to the Facility Site will serve to reduce visibility. No lighting will be installed with the PV arrays. Any lighting associated with the Facility will be at the proposed substation or O&M Building. The nature of the technology is such that visibility is anticipated to be relatively limited to those areas located adjacent to the Facility. For that reason, the Applicant intends to use a two-mile study area for assessment of potential visual impacts (Visual Study Area). The Study Area includes the Towns of Cambria, Pendleton, Lockport, and Wheatfield. Western portions of the City of Lockport are also included in the Visual Study Area. Although the PV modules would be the most widespread Facility component, the visual impact is anticipated to be negligible due to vegetation screening and topography. The tallest structures associated with the Facility would be the lightning masts and loop-in structures located within the proposed substation. Visibility of these features within 1 mile of the proposed substation will be addressed in the VIA as well.

To illustrate the Facility's visual impact on visually sensitive resources, zones of foreground, midground, and background will be established. Resources will be classified into the established zones based on their distance from Facility components. Landscape Similarity Zones (LSZs) within the study area will be identified and defined by landscape setting, land use, and visual characteristics of the Study Area. A preliminary identification of potentially sensitive visual resources is presented in Figure 5.

To illustrate anticipated visual change from areas where PV modules will be visible, photographic simulations of the completed Facility from representative viewpoints will be prepared and presented in the VIA. Review of these images alongside the original, unaltered photos will allow for comparison of the aesthetic character of each view with and without the proposed Facility in place. These "before" and "after" photographs, identical in every respect except for the Facility components shown in the simulated views, will be presented to a rating panel comprised of registered landscape architects and/or planners who will be asked to rate and describe the effect of the proposed Facility in terms of its contrast with existing elements of the landscape. The rating results will be presented in the VIA along with an interpretive summary of their significance.

The VIA will also include a discussion of mitigation options for anticipated visual impacts. Approaches to visual mitigation for solar projects include selection of equipment/technology, siting/setbacks, row spacing, fencing, and screening. These and other mitigation measures will be considered for application in additional areas once the final Facility design, viewshed analysis, and field review have been completed.

Consistent with the requirements of 1001.24 of the Article 10 Regulations, Exhibit 24 of the Application will contain the following information:

(a) Visual Impact Assessment

A VIA will be conducted in accordance with 1001.24 to determine and assess the significance of Facility visibility. The VIA procedures used for this study will be consistent with Exhibit 24 requirements and the general methodologies developed by various state and federal agencies, including the U.S. Department of the Interior, Bureau of Land Management[35], U.S. Department of Agriculture, National Forest Service[36], the U.S. Department of Transportation, Federal Highway Administration (1981), the NYSDEC[37], and the National Park Service's "Guide To Evaluating Visual Impact Assessments for Renewable Energy Projects[38]". The components of the VIA shall include identification of visually sensitive resources, viewshed mapping, confirmatory visual assessment fieldwork, visual simulations (photographic overlays), and proposed visual impact mitigation. The VIA shall include:

1) A two-mile Visual Study Area will be established for the purpose of identifying visually sensitive resources of regional and/or statewide significance in addition to an inventory of locally significant visually sensitive resources. Distinct LSZs within the Visual Study Area will be identified and defined (including discussion and analysis of the existing landscape setting, land uses and visual characteristics of the study area) and the approximate location of these LSZs will be illustrated in the Application.
2) Topographic and Vegetation viewshed maps created to identify potential visibility of the PV arrays, and the methodology for these analyses will be described in detail in the Application. Visual field review will be conducted in the Visual Study Area. During these site visits, public roads and public vantage points will be visited to document locations from which Facility components would likely be visible, partially screened, or fully screened. This determination will be made based on the visibility of the distinctive Facility site ridges/landforms, as well as existing features (such as residences and hedgerows) on the Facility site, which

[35] United States Department of the Interior, Bureau of Land Management. 1980. *Visual Resource Management Program*. U.S. Government Printing Office. 1980. 0-302-993. Washington, D.C.
[36] USDA, National Forest Service. 1995. *Landscape Aesthetics, A Handbook for Scenery Management*. Agricultural Handbook 701. Washington D.C.
[37] New York State Department of Environmental Conservation (NYSDEC). 2000. *Program Policy: Assessing and Mitigating Visual Impacts*. DEP-00-2. Division of Environmental Permits, Albany, NY.
[38] U.S. Dept of the Interior, National Park Service. 2014. *Guide to Evaluating Visual Impact Assessments for Renewable Energy Projects.* Accessed at: http://blmwyomingvisual.anl.gov/docs/NRR_VIAGuide-RenewableEnergy_2014-08-08_large.pdf.

will serve as locational and scale references. These site visits will result in photographs from many representative viewpoints within the study area. The viewpoints will document potential visibility of the Facility from the various LSZs, distance zones, directions, visually sensitive resources, and areas of high public use throughout the Visual Study Area. Viewpoint locations will be documented using hand-held global positioning system (GPS) units and high-resolution aerial photographs (digital ortho quarter quadrangles). The time and location of each photo will be documented on all electronic equipment (cameras, GPS units, etc.) and noted on field maps and data sheets. The results of the field review will be presented in detail with visual aids in the VIA.

3) Above-ground/visible Facility components will be included in all visual simulations of areas in which they would be visible. This will include visual simulations that depict the proposed substation and substation. It is anticipated that the collection systems for the Facility will be mounted on the racking, installed in conduit on the ground within the fenced-in areas or buried underground, but there may be locations where overhead lines could be necessary. Where overhead collection lines are used, they will also be also be depicted in visual simulations.
4) Photographic simulations will be developed by constructing a three-dimensional computer model of the proposed PV modules, inverters, and the remainder of the Facility layout based on specifications provided by the manufacturers and/or the Applicant. The computer model will include the PV modules, any proposed vegetation clearing, the substation, the O&M facilities (including exterior color and finish), and the location and appearance of other visible components of the Facility, all of which will be incorporated into the photographic simulations.
5) No lighting will be installed as part of the PV arrays. The only lighting that will be installed as part of the Facility will be at the proposed substation, and potentially at an O&M building. The potential impact of proposed lighting that needs to be installed as part of the Facility, as well as mitigation measures, will be described in the Article 10 Application.
6) Photographic simulations will be developed by using Autodesk 3ds Max (or similar) to create a simulated perspective (camera view) to match the location, bearing, and focal length of each existing conditions photograph. Existing elements in the view (e.g., buildings, existing transmission structures, roads) will be modeled based on aerial photographs and DEM data in AutoCAD Civil 3D (or similar). A three dimensional (3-D) topographic mesh of the landform (based on DEM data) will then be brought into the 3-D model space. At this point minor adjustments are made to camera and target location, focal length, and camera roll to align all modeled elements with the corresponding elements in the photograph.
7) The VIA will include a discussion of short-term visual impacts associated with the clearing of trees, construction of access driveways, installation of PV modules, and general construction activity.

8) An evaluation of impacts to visual resources from Facility visibility during operation by a panel of three registered landscape architects using a standardized rating form. The methodology utilized in this evaluation will be a simplified version of the U.S. Department of the Interior, BLM contrast rating methodology, and the rating form instructions will also be included with the Application.
9) An evaluation of potential operational effects of the Facility will be conducted. Regarding the potential for glare, PV modules are designed to absorb as much of the solar spectrum as possible to maximize efficiency. There is an inverse correlation between light absorption and reflection. Consequently, virtually all PV modules installed in recent years have at least one anti-reflective coating to minimize reflection and maximize absorption. However, at high incident angles above approximately 60°, reflectance also increases and can cause glare. Using basic geometry and seasonal sun paths, the potential for glare can be predicted at times when the sunlight will shine on the panels at high incident angles. A preliminary study will be provided in the Application to identify observer locations, if any, that may require further analysis of glare effects. Operation of the Facility will not have any other visible effect such as generating plumes, off-site shading, shadow-flicker, etc. Therefore, this evaluation will focus on the visual appearance of the PV modules and other Facility components.
10) An assessment of various visual impact mitigation strategies including screening (landscaping), setbacks, architectural design, visual offsets, relocating or rearranging Facility components, reduction of Facility component profiles, alternative technologies, Facility color and design, and lighting options. Mitigation will also be assessed in relation to NYSDEC Program Policy DEP-00-2[39].
11) Identification and description of all visually sensitive resources (see (b)(4) below for additional information) within the Visual Study Area, and assessment of probable impacts of the Facility on these resources. Visually sensitive resources will also include any specific location identified by municipal planning representatives, NYSDPS, NYSDEC and NYSOPRHP. This will include discussion of potential visual impacts on residences located within the Facility Area.

(b) Viewshed Analysis

A viewshed analysis will be included in the VIA that identifies the locations within the Visual Study Area where it may be possible to view the proposed PV arrays and other proposed above ground facilities from ground-level vantage points. This analysis includes identifying potentially visible areas on viewshed maps. The viewshed analysis component of the VIA includes:

[39] New York State Department of Environmental Conservation (NYSDEC). 2000. Program Policy: Assessing and Mitigating Visual Impacts. DEP-00-2. Division of Environmental Permits, Albany, NY.

1) Maps showing the results of viewshed analyses based on: 1. the screening effect of topography alone, and, 2. the combined screening effect of topography, vegetation, and built structures within the environment. Viewshed analyses will be based on sample points representing PV module locations based on the Facility Layout presented in the Application; an assumed maximum PV module height of 12 feet; and, an assumed viewer height of six feet. To generate the viewshed analyses, sample points with an assigned height of 12 feet (representing the PV modules) will be placed 200 feet apart in a grid pattern throughout all proposed development areas within the Facility Site. These maps will be presented on the most recent edition USGS 1:24,000 scale topographic base map. Additionally, results of the viewshed analyses will also be shown on maps that depict visually sensitive sites, viewpoint locations, foreground, mid-ground, and background distance zones, and LSZs. The viewshed analyses will serve to document the line of sight profiles for resources of statewide concern.
2) Two-mile radius viewshed maps to determine the extent of potential Facility visibility based on existing topography, vegetation, and structures, and the location and height of the proposed PV modules. Topographic viewshed maps will be prepared using USGS DEM data; sample points representing PV module locations based on the Facility Layout presented in the Application; an assumed maximum PV module height of 12 feet; an assumed viewer height of six feet; and ESRI ArcGIS® software. The resulting topographic viewshed map defines the maximum area from which any PV module sample point could potentially be seen within the Visual Study Area (i.e., ignoring the screening effects of existing vegetation and built structures). A second-level analysis will be conducted to incorporate the screening effect of structures and vegetation, as captured in lidar data (if available). A digital surface model ("DSM") of the study area would be created from these lidar data, which includes the elevations of buildings, trees, and other objects large enough to be resolved by lidar technology. If lidar data is not available, a base vegetation layer will be created using the USGS NLCD to identify the mapped location of forest land within those portions of the Visual Study Area. Based on standard visual assessment practice, the mapped locations of the forest land in these areas will be assigned an assumed height of 40 feet and added to the DEM.
3) Identification of visually sensitive resources using a variety of data sources including digital geospatial data (shapefiles) obtained primarily through the NYS GIS Clearinghouse or ESRI, national, state, county and local agency/program websites as well as websites specific to identified resources; USGS 7.5-minute topographical maps; and web mapping services such as Google Maps. Identified aesthetic resources of statewide or local significance, areas of intensive land use within five miles of the proposed Facility, and location of visually sensitive resources within the visual study will be included with the Application. Visually sensitive resources will also include any specific location identified by municipal planning representatives, NYSDPS, NYSDEC and NYSOPRHP.

4) Identification of representative viewpoints to be used for visual simulations. Representative viewpoints will be selected based upon past and future consultation with, and feedback provided by members of the public, engaged stakeholders, municipal planning representatives, NYSDPS, NYSDEC and NYSOPRHP; while also balanced by the criteria below to ensure that a variety of views are represented. The Applicant will continue to conduct outreach to agency staff and stakeholder groups to determine an appropriate set of viewpoints for the development of simulations. The Applicant will include a list of visual stakeholders and copies of viewpoint selection correspondence in the Application. In addition, the Applicant will include the visual representatives on the Master Stakeholder List for notification of project milestones and outreach activities. This outreach will include: a) Applicant distribution of a request to appropriate agency personnel, municipal representatives, and other visual stakeholders, seeking feedback regarding the identification of important aesthetic resources and/or representative viewpoints in the Facility vicinity to inform field review efforts and the eventual selection of candidate viewpoints for the development of visual simulations; b) Following the visual fieldwork and associated data processing, the Applicant's distribution of a memorandum related to recommendations for Visual Simulations to the visual stakeholders; and c) The Applicant hosting an on-line meeting to solicit comments from visual stakeholders on the viewpoints selected. The selected viewpoints will:

   i) Provide open views toward the Facility site from different directions throughout the Visual Study Area (as determined through field verification).
   ii) Illustrate the most open views available from potentially significant public resources within the Visual Study Area.
   iii) Illustrate open, representative views from the various LSZs within the Visual Study Area, which are defined based on the similarity of features such as landform, vegetation, water, and land use patterns.
   iv) Illustrate open views of the proposed Facility that may be available to representative viewer/user groups within the Visual Study Area (including local residents).
   v) Illustrate typical views of different numbers of PV module arrays, from a variety of viewer distances, and under different lighting conditions, to illustrate the range of visual change that will occur with the Facility in place.

5) Photo-realistic simulations of the completed Facility from each of the selected viewpoints. The photos selected for visual simulations will illustrate a range of typical/representative conditions, including leaf-on and leaf-off conditions.
6) The Article 10 Application will include visual simulations or other representative images that illustrate the various visual mitigation measures (such as fence styles or plantings) that are being considered for the

Facility.

7) A composite contrast rating for each viewpoint, including viewer exposure and activity. All rating forms will be included in the Application along with a narrative description of the existing view and overall visual effect representing the nature and degree of visual change resulting from construction and operation of the Facility on scenic resources and viewers represented by each of the selected viewpoints using comments provided by the rating panel members.
8) Operation of the Facility will not result in any operational visual effects, plumes, shadow-flicker, or off-site shading, other than visibility of the PV modules and other Facility components. Therefore, these types of effects will not be evaluated in the Application.

2.25 EFFECT ON TRANSPORTATION

This Exhibit of the Application will evaluate the suitability of and potential impacts to, the transportation networks to be used in the construction of the Facility. The Application will include an evaluation of existing conditions including typical traffic volumes and accidents, school district and emergency service provider routes, and current road conditions/limitations and the potential impacts to these resources. A Route Evaluation Study will be prepared to identify public road constraints, potential haul routes, and impacts to transportation systems and will be included in the Application. Consultation with local emergency service providers will inform service routes and the emergency training and communication plan. During Facility construction, all trucks carrying water, fuels, or chemicals will utilize the same haul routes used by other construction vehicles/component delivery haulers, as identified in the Route Evaluation Study. Any workers and employees in regular vehicles (pick-up truck size and smaller) will access the construction site and worker parking areas through use of whichever public road route is most logical and efficient for the respective individual/vehicle. Employees and workers accessing the site with heavy haul/construction equipment will follow the identified specified haul routes. Synchro and HCS software (or similar software generally accepted by the industry) will be utilized to determine levels of service for linear segments of highways used by construction and delivery vehicles. Additional detail will be included in the Article 10 Application.

The Application will include an identification of the possible extent and duration of traffic interferences resulting from construction of the Facility and any interconnects. Once the Facility is commissioned and construction activities are concluded, traffic associated with Facility operation will be negligible and limited to occasional trips associated with routine maintenance activities. As such, no new traffic control devices are anticipated to be necessary, and no damage to roads due to normal operation of the Facility are expected to occur.

In addition, the Article 10 Application will summarize the meetings and consultations that the Applicant plans to hold with local emergency service providers and County and Town Highway Departments serving municipalities within the Facility Area. During these meetings the Applicant will continue to discuss the proposed Facility, Article 10 process, road use agreements and general construction and transportation process when constructing a solar facility.

Consistent with the requirements 1001.25 of the Article 10 regulations, Exhibit 25 of the Application will contain the following information:

(a) Conceptual Site Plan

For the purposes of the Article 10 Application, the preliminary design drawings prepared in association with Exhibit 11 will serve as the conceptual site plan. The drawings will include information required by 1001.25(a).

(b) Description of the Pre-construction Characteristics of Roads in the Area

The Applicant agrees to provide the information required by 1001.25(b) sections one through five in the Article 10 Application.

(c) Facility Trip Generation Characteristics

The Applicant will provide the information required by 1001.25(c) one through four.

(d) Traffic and Transportation Impacts

The Applicant will provide the information required by 1001.25 (d) sections one through five in the Article 10 Application. Although not anticipated, any improvements to public roads will be made at the Applicant's expense prior to oversized/overweight deliveries. No damage to public roads is anticipated as a result of the construction or operation of the proposed Facility. However, if it is determined that a road use agreement is required, it will be included in the Application.

(e) Impact of the Facility on Mass Transit Systems

There are no mass transit systems within the Facility Site. Accordingly, mass transit systems are not anticipated to be affected by the construction and operation of the Facility and will not be addressed in the Article 10 Application.

(f) Federal Aviation Administration Review

The Applicant agrees to provide the information required by 1001.25(f) sections one through three. Construction and operation of the Facility are not anticipated to affect aviation and therefore will not be addressed in the Article 10 Application. However, the Applicant will communicate information regarding the Facility's development and status to the Niagara Falls International Airport and the Niagara Falls Air Reserve Station.

2.26 EFFECT ON COMMUNICATION

The Article 10 Application will identify all existing broadcasting communication sources within a two-mile radius of the Facility and the associated interconnection. A map of underground cable and fiber optic major transmission telecommunication lines known by the Applicant within two-miles of the Facility will be provided.

The Applicant is not aware of any research conducted to date that indicates that utility-scale solar generation facilities have the potential to interfere with any existing communication systems. The Facility is not expected to have any material impact on existing communication systems because it will lack tall structures, exposed moving parts, and it will generate only very weak electromagnetic fields (EMFs). The "PV arrays generate EMF in the same extremely low frequency (ELF) range as electrical appliances and wiring found in most homes and buildings;"[40] EMF has not been found to be elevated above background levels[41].

Additionally, the Facility is not expected to have any material impact on military or civilian radar systems because it lacks tall structures that could potentially block radar signals. As noted above, it also lacks exposed moving parts and it will generate only very weak EMFs that will dissipate rapidly within short distances. The Federal Aviation Administration (FAA) has concluded that solar arrays do not cause radar interference:

> "Radar interference occurs when objects are placed too close to a radar sail (or antenna) and reflect or block the transmission of signals between the radar antenna and the receiver (either a plane or a remote location).
> . . .
> Due to their low profiles, solar PV systems typically represent little risk of interfering with radar transmissions. In addition, solar modules do not emit electromagnetic waves over distances that would interfere with radar signal transmissions, and any electrical facilities that do carry concentrated current are buried beneath the ground and away from any signal transmission"[42] .

Effects on the Global Positioning System (GPS) are not anticipated and amateur radio users are not anticipated to be affected by the construction and operation of the Facility. However, the Application will identify the GPS ground facility located closest to the proposed Facility and all amateur radio licenses within a two-mile radius. While the Facility is not anticipated to affect emergency communications systems, the Application will evaluate potential impacts on local emergency communications systems. LORAN radio signals will not be addressed in the Article 10 Application because all signals were terminated in 2010 in accordance with the Department of Homeland Security Appropriations Act.

[40] Massachusetts Department of Energy Resources, et al., (MDER). 2015. "Clean Energy Results: Questions and Answers, Ground-Mounted Solar Photovoltaic Systems" (June 2015) ("MDER Q&A"), p. 10.
[41] Massachusetts Clean Energy Center (MCEC). 2012. "Study of Acoustic and EMF Levels from Solar Photovoltaic Projects" (Dec. 2012), p. iv.
[42] Federal Aviation Administration (FAA). 2010. "Technical Guidance for Evaluating Selected Solar Technologies on Airports" (November 2010) ("FAA Guidance"), p. 8-9.

The Application will also evaluate impacts to municipal/school district services, public utility services, and doppler/weather radar. The Application will include the location of all existing major underground cable and fiber optic transmission telecommunications lines within a two-mile radius of the Facility[43].

Communication systems are not anticipated to be affected by the construction and operation of the Facility. However, as described in Section 2.15, the Applicant will develop a Complaint Resolution Plan through which residents can issue a formal complaint should any issues arise as a result of construction or operation of the Facility. This plan will be included with the Article 10 Application.

Consistent with the requirements of 1001.26 of the Article 10 regulations, Exhibit 26 of the Application will contain the required information for 1001.26 (a) through (f).

[43] Magellan Advisors. 2015. "Niagara County Broadband Assessment and Fiber-Optic Network Development Plan for the Niagara Falls International Airport Focus Area". Available at: https://www.niagaracountybusiness.com/NFIA_Stakeholders_Group_Fiber_Optic_Assessment.pdf

2.27 SOCIOECONOMIC EFFECTS

To quantify the local economic impacts of constructing and operating the Facility, the Job and Economic Development Impact (JEDI) model will be used, which was created by the National Renewable Energy Laboratory (NREL), a national laboratory of the United States Department of Energy. The model calculates various indicators for each level of impact using project-specific data provided by the Applicant and geographically-defined multipliers. These multipliers are produced by IMPLAN Group, LLC using a software/database system called IMPLAN (IMpact analysis for PLANning), a widely-used and widely-accepted general input-output modeling software and data system that tracks each unique industry group in every level of the regional data[44].

Calculating the number of jobs and economic output associated with a proposed facility using the JEDI model is a twostep process. The first step requires facility-specific data inputs (such as year of construction, size of facility, nameplate capacity and location). The next step of analysis requires a detailed input of project cost values into the JEDI model, including project cost values, financial parameter values, default tax values, default lease payment values, and default local share of spending values. Based on these customized cost inputs, the JEDI model then calculates the economic impacts, typically through the use of county-specific and state-specific multipliers. These multipliers account for the change in jobs, earnings, and output likely to occur throughout the economy as a result of Facility-related expenditures. This model allows impacts to be estimated for both the construction and operation phases of the proposed development. The Article 10 Application will present the results of the JEDI model.

Specifically, the Article 10 Application will analyze three levels of impact that the proposed Facility will have on the economy:

1. On-site labor impacts: These are the direct impacts experienced by the companies engaged in the construction and operation of the Facility. This value estimates the dollars spent on labor and professional services by Facility developers, consultants, and construction contractors, as well as and O&M personnel. On-site labor impacts do not reflect material expenditures.

2. Local revenue and supply chain impacts: These impacts measure the estimated increase in demand for goods and services in industry sectors such as local food and hotel industries, that supply or otherwise support the companies engaged in construction and operation (also known as “backward-linked” industries).

3. Induced impacts: Induced impacts measure the estimated effect of increased household income resulting from the Facility. Induced impacts reflect the reinvestment of earned wages, as measured throughout the first two levels of economic impact. This reinvestment can occur anywhere within the economy, on household

[44] IMPLAN. 2018. Available at: http://www.implan.com/company/.

goods, entertainment, food, clothing, transportation, etc. Household income may also be increased as a result of the downward pressure on wholesale electric prices in the NYISO resulting from the introduction of low marginal cost electric supplies, from the Facility and from other wind and solar generating facilities elsewhere in NY.

Each of these three levels can be measured in terms of three indicators: jobs (as expressed through the increase in employment demand), the amount of money earned through those jobs, and the overall economic output associated with each level of economic impact. These indicators are described in further detail below:

- Jobs: Jobs refer to the increase in employment demand as a result of Facility development. These positions are measured across each level of impact, so that they capture the estimated number of jobs on site, in supporting industries, and in the businesses that benefit from household spending. For the purposes of this analysis, this term refers to the total number of year-long full-time equivalent (FTE) positions created by the development. Persons employed for less than full time or less than a full year are included in this total, each representing a fraction of an FTE position (e.g. a half-time, year-round position is 0.5 FTE).
- Earnings: This measures the wages earned by the employees described above.
- Output: Output refers to the value of industry production in the state or local economy, across all appropriate sectors, associated with each level of impact. For the manufacturing sector, output is calculated by total sales plus or minus changes in inventory. For the retail sector, output is equal to gross profit margin. For the service sector, it is equal to sales volume.

The Article 10 Application will present the results of the JEDI model analysis of Facility-specific inputs, including estimates of the impact the proposed Facility may have on the economy, including on-site labor impacts, local revenue and supply chain impacts, and any induced impacts associated with construction and operation of the Facility. The Applicant will provide the work papers used in the creation of the job impact estimates. In addition, the Article 10 Application will include a discussion of any anticipated impacts to property value pertaining to development of the Facility.

Consistent with 1001.27 of the Article 10 regulations, Exhibit 27 of the Application will contain the following information:

(a) Construction Workforce

An estimate of the average construction workforce, by discipline, for each quarter, during the period of construction for the Facility, including the estimated peak construction employment level.

(b) Construction Payroll

An estimate of the annual construction payroll and non-payroll expenditures associated with the Facility. This will include an estimate of the annual construction payroll by trade.

(c) Secondary Employment and Economic Activity Generated by Facility Construction

An estimate of the secondary employment and economic activity associated with Facility construction. Economic multiplier factors and other assumption(s) used to generate these estimates will be described. To the extent reasonably practicable, the analysis of secondary employment and economic activity will also reflect the economic impacts associated with any changes in the retail price of electricity as well as the economic impacts associated with the cancellation or closure of any new or existing power plants made unnecessary by the added wind capacity of the facility. If such estimates cannot be reasonably made, the Applicant shall never the less acknowledge that such secondary employment and economic activity impacts will result from the project, even though no quantitative estimate has been made.

(d) Workforce, Payroll, and Expenditures During Facility Operation

An estimate of secondary employment and economic activity generated by Facility operation. The Application will also include additional information associated with payments to local landowners in association with the lease agreements executed to host Facility components.

(e) Secondary Employment and Economic Activity Generated by Facility Operation

An estimate of secondary employment and economic activity generated by Facility operation. The Application will also include additional information associated with payments to local landowners in association with the lease agreements executed to host Facility components.

(f) Incremental School District Operating and Infrastructure Costs

A confirmation that construction and operation of the Facility is not expected to result in any incremental school district operating and infrastructure costs.

(g) Incremental Municipal, Public Authority, or Utility Operating and Infrastructure Costs

A confirmation that construction and operation of the Facility is not expected to result in any incremental costs to local municipalities, authorities, or utilities.

(h) Jurisdictions that Will Collect Taxes or Benefits

A list of jurisdictions that will collect taxes or benefits from construction and operation of the Facility

(i) Incremental Amount of Annual Taxes or Payments

An estimate and details of annual taxes and payments to be paid by the Facility to the jurisdictions listed in 1001.27(h).

(j) Comparison of Incremental Costs and Incremental Benefits

A comparison of incremental costs and incremental benefits to jurisdictions resulting from construction and operation of the Facility.

(k) Equipment or Training Deficiencies in Local Emergency Response Capacity

A discussion of any potential equipment or training deficiencies in the local emergency response capacity as it relates to the needs of the Facility.

(l) Consistency with State Smart Growth Public Infrastructure Criteria

A discussion of the Facility's consistency with the State Smart Growth Public Infrastructure criteria.

2.28 ENVIRONMENTAL JUSTICE

Exhibit 28 of the Article 10 Application requires the Applicant to provide sufficient information for the New York State Department of Environmental Conservation (NYSDEC) and others to assess the potential impact of the Facility on Environmental Justice communities. However, it should be noted that the intent of an Environmental Justice evaluation is to determine if air quality and associated health impacts are disproportionately affecting certain communities or populations. The Applicant has considered whether the Project could have negative impacts on nearby environmental justice areas. As previously indicated, the Facility is a solar powered electrical generation facility that will not result in emissions or air quality impacts beyond vehicle/equipment emissions and fugitive dust during construction (see Section 2.15). Therefore, for the purposes of the Environmental Justice evaluation, and based on the criteria set forth in 6 NYCRR 487.4, the Applicant has defined the "Impact Study Area" to consist of a 0.5-mile radius around each of the Facility components, which is considered to be a conservative basis for evaluating potential impacts.

Based on data obtained from the NYSDEC's GIS Tools for Environmental Justice website[45], there are no Potential Environmental Justice Areas within the Impact Study Area. The nearest Potential Environmental Justice Area to the Facility is located within the City of Lockport and is approximately 4 miles east of the Facility Site boundary. A map of these potential Environmental Justice Areas, in relation to the Facility Site, will be provided in the Article 10 Application.

Because of the distance between the proposed Facility and the Potential Environmental Justice Area described above, the Facility is not expected to have an impact on this or any other Environmental Justice Areas. Therefore, the full Environmental Justice Analysis outlined in 6 NYCRR 487.6 is not required and will not be provided in the Article 10 Application.

[45] http://www.dec.ny.gov/public/911.html.

2.29 SITE RESTORATION AND DECOMMISSIONING

The Article 10 Application will include a discussion regarding the process and method for decommissioning and restoration of the Facility at the end of its useful life (20-40 years). Because nearly all Facility components are being sited on open, agricultural lands, no impact to the future use of these lands are anticipated. Lands comprising the Facility Site will be available to return to previous land uses (e.g. agriculture) or used as the landowner sees fit. Areas where minimal grading is necessary (e.g., access roads, substations) will be restored to maintain existing drainage patterns at the time of decommissioning, reseeded using local non-invasive grasses, unless otherwise requested by the landowner. Exhibit 11 of the Application will include Preliminary Design Drawings displaying the limit of grading for Facility components. During site restoration, disturbed areas will be replanted with native seed mixes or returned to their previous land use.

Consistent with the requirements of 1001.29 of the Article 10 regulations, Exhibit 29 of the Application will contain the following information:

(a) Performance Criteria

The Article 10 Application will provide a statement of the performance criteria proposed for the decommissioning and restoration of the Facility, and the proposed form of financial security adequate to fund the decommissioning and site restoration, as appropriate. The security will take into account the independently estimated salvage value and/or resale value of the Facility components, as well as the anticipated cost for the removal of Facility components.

(b) Decommissioning and Restoration Plan

Utility-scale PV facilities typically have a life expectancy of 20-40 years[46]. At the end of its useful life, the Facility will be decommissioned, in accordance with the Decommissioning and Restoration Plan. The Decommissioning and Restoration Plan will be included with the Article 10 Application and will address the following:

- Decommissioning and restoration will be triggered if the Facility is non-operational for no less than two years, unless otherwise agreed to by the Towns and DPS Staff.
- All above-ground structures will be removed (e.g. O&M facility, collection substation, etc.).
- Buried collection lines will be de-energized and removed in accordance with April 2018 version of the NYS Department of Agriculture Guidelines for Agricultural Mitigation for Solar Energy Projects, to the maximum extent practicable. Restoration of the site will commence after the decommissioning of Facility components and will be discussed in further detail in the Application.

[46] NYSUN, 2016. NY-Sun NYSERDA Decommissioning Solar Panel Systems Fact Sheet. Assessible: https://www.nyserda.ny.gov/-/media/NYSun/.../Decommissioning-Solar-Systems.pdf.

- Ground disturbance during decommissioning and restoration will be minimized to the extent practicable and the site will be restored to its original condition to the extent practicable, except where otherwise requested by a landowner.
- The Applicant will provide written notification to the Towns within a reasonable timeframe prior to the commencement of site restoration following decommissioning activities. The procedures and schedule for notification will be included in the Application's Decommissioning and Restoration Plan.
- The type of financial assurance, as needed and secured by the Applicant, for the purpose of adequately performing decommissioning will be described. The value of the financial assurance will be based on a Professional Engineer's certified estimate of decommissioning and restoration cost, less the expected salvage value and/or resale value of the Facility's components. The decommissioning and restoration estimate will be submitted for NYSDPS Staff and Town review to ensure consistency with the methodology approved in the Certificate.
- The first decommissioning and restoration estimate shall be provided prior to Facility construction, the second estimate after one year of Facility operation, and subsequent estimates every fifth year thereafter, based on prices and values at the time the subsequent estimates are prepared.
- The time when the Applicant will post and maintain financial assurance in the amount of the net decommissioning costs will be indicated.
- A description of the process for removal of the Facility and accessing the financial assurance should the Applicant be unable to implement the Decommissioning and Restoration Plan.
- The Decommissioning and Restoration Plan will be binding upon the Applicant, or any of its successors, or assigns.
- Provisions allowing for access to the Facility Site for Towns or other designee(s), pursuant to reasonable notice to the Applicant, to inspect the completed decommissioning and restoration activities.

Information on the method and schedule for updating the cost of decommissioning and restoration, the method of ensuring funds will be available for decommissioning and restoration, and the method by which the Facility will be decommissioned, and the site restored will be provided in Exhibit 29(b) of the Application.

(c) Description of Decommissioning/Restoration Agreements Between Applicants and Landowners

All Facility components are planned to be sited on private lands under lease agreement with the Applicant. Each lease will contain a provision on decommissioning and restoration. Although the specific terms of the lease agreements are confidential, decommissioning and restoration provisions will outline a plan similar to the Decommissioning and Restoration Plan to be described in the Article 10 Application.

(d) Nuclear Power Facilities

This section is not applicable and therefore will not be addressed in the Article 10 Application.

2.30 NUCLEAR FACILITIES

The proposed Facility is not a nuclear facility, and as such, the requirements of 1001.30 are not applicable and will not be addressed in the Article 10 Application.

2.31 LOCAL LAWS AND ORDINANCES

The Facility will be located in Niagara County, New York, in the Towns of Cambria and Pendleton. Throughout the pre-application process, the Applicant has been conferring with these municipalities on a range of issues, including identifying relevant local laws and ordinances that could impact the Facility as described further below. The Applicant will continue to consult with the municipalities during the Article 10 Application process to ensure that all applicable laws and ordinances are addressed in the Article 10 Application.

This PSS reflects the local laws as they existed at the time of the PSS submission, and is intended to identify the areas of local laws/codes relevant to the proposed Facility. The Application will account for any amendments or additional local laws enacted in any host municipality between the submission of this PSS and the Application. The list provided below is intended to give a general overview of the types of local regulation which are potentially applicable to the Facility as proposed, and the areas of local law which will need to be discussed further in the Application.

The Application will contain only those Local Laws and Ordinances for Niagara County and the Towns in which the Applicant proposes to locate the Facility.

Consistent with the requirements of 1001.31 of the Public Service Law, Exhibit 31 of the Application will contain the following information:

(a) List of Applicable Local Ordinances and Laws of a Procedural Nature

A list of applicable local ordinances, laws, resolutions, regulations, standards, and other requirements of a procedural nature required (at the time of Application submittal) for the construction (including maintenance of construction equipment) or operation of the proposed Facility. A copy of all local laws obtained by the Applicant and/or provided by the host municipalities, including maps, figures, tables and other attachments to local laws (assuming such information is readily available), will be included as an appendix to the Application.

Below is a preliminary list of applicable local laws and ordinances of a procedural nature that may be applicable to the Facility. Generally, it is not known at this early stage whether the Facility will trigger certain of the identified regulations listed below; the list is meant to provide a broad overview based on an initial screen of Town laws:

Town of Pendleton

Chapter 132: Fire Prevention and Building Code Administration

- § 132-4 Building Permits
- § 132-7 Certificates of Occupancy/Compliance

Chapter 217: Excavations

- § 217-1 Permit required prior to opening or excavation in any street, highway, lane or alley, including any sidewalk

Chapter 247: Zoning

- §247-30: No fences shall be erected without first obtaining a permit from the Code Enforcement Officer
- § 247-44: Topsoil and Overburden
- § 247-45: Road Debris
- § 247-54: Site Plan Review; Performance and Design Standards
- § 247-68.21: Site plan requirements for large-scale solar energy systems.
    - § A - Applicants for large-scale solar energy systems shall submit an application for site plan review.
        - (1) Utility interconnection data and a copy of written notification to the utility of the proposed interconnection; and
        - (2) One- or three-line electrical diagram; and
        - (3) Plans and drawings of the solar energy system installation signed by a professional engineer; and
        - (4) Property lot lines and the location and dimensions of all existing structures and uses on site within 500 feet of the solar panels; and
        - (5) Proposed fencing and/or screening for said project; and
- § 247-68.22. Large-scale solar energy systems design criteria.
    - B. Applicant shall provide to the Building Inspector a post-construction certification from a professional engineer.
    - C. Compliance with regulatory agencies.
- § 247-68.23. Maintenance; procedures; and fees.
    - A. Removal.
    - B. Determination of abandonment or inoperability.
    - C. Application and annual fees.
        - (1) Large-scale solar energy system. An applicant shall pay an initial application fee of $2,500 or such other amount as the Planning Board may determine for site plan application to cover the cost of processing and reviewing the application.
        - (2) A public hearing fee of $100 applies.

- D. Any changes or alterations post-construction to a large-scale energy system shall be done only by application to amend the site plan approval subject to all requirements of this Code.

Town of Cambria

LOCAL LAW NO. 1 OF THE YEAR, 2015

Large-Scale and Utility-Scale Solar Energy Systems

- § 3. Permits and Approvals Required and Applicable Zoning Districts
  - A. Building permit required
  - D. Special use permit required
- § 4. Applications for Solar Energy Systems
  - B. Special use permit required
  - C. Application contents
    - (1) Plans and drawings
    - (2) Engineer certification
    - (3) Electrical diagram
    - (4) Documentation of access to project sites
    - (5) Plan for clearing and grading
    - (6) Documentation of utility notification
    - (7) Decommissioning plan
    - (8) Sunchart
  - D. Fees
- § 5 General Provisions
  - B. Additional Criteria for Applications for utility-scale solar energy systems
    - (1) Photo simulations
    - (2) Post-construction certification from engineer

Niagara County

- Local Law No. 5 of 2007 – Stormwater Management and Erosion and Sediment Control

(b) Local Procedural Requirements Requiring Board Authorization

By law, all local procedural requirements are supplanted by Article 10 unless otherwise expressly authorized by the Siting Board. At this time, the Applicant has not identified any local procedural requirements requiring Board authorization.

To the extent the Town and/or County require any permit or approval to perform work within municipal rights-of way, or on municipally owned roads, the Applicant may request that the Board grant the Town and/or County authority to issue such permits or approvals, separately or in connection with a local Road Use Agreement, if one is proposed. The Applicant will work with the Town and County to understand the procedural and substantive requirements for highway work permits, and any issues of local concern. Similarly, the Applicant may seek authorization from the Siting Board for the Towns to issue local ministerial permits.

(c) Identification of Municipal Agency Qualified to Review and Approve Building Permits

Municipal officials are generally responsible for reviewing and approving local building permits and ensuring compliance with the New York State Fire Prevention and Building Code and Energy Conservation Code of New York State. In addition, the Town may choose to contract with qualified consultants to assist their review and approval of the Facility. The Applicant will work with the municipalities to identify these individuals and/or entities. Any arrangements between the Applicant and regarding the scheduling of such consultants will be described and included as part of the Article 10 Application.

(d) List of Applicable Local Ordinances and Laws of Substantive Nature

A list of applicable local ordinances, laws, resolutions, regulations, standards, and other requirements of a substantive nature required (at the time of Application submittal) for the construction or operation of the proposed Facility, including local solar energy laws and any overlay requirements. Copies of zoning and similar maps, tables and/or documents related to local substantive requirements will be included in the Article 10 Application.

Below is a preliminary list of applicable local laws and ordinances of a substantive nature that may be applicable to the Facility. Generally, it is not known at this early stage whether the Facility will trigger certain of the identified regulations listed below; the list is meant to provide a broad overview based on an initial screen of Town laws:

Town of Pendleton

- § 247-32 Glare, noise, odor and other nuisances.
- § 247-52 Loading and Unloading
- § 247-53 Signage
- § 247-68.21 (A)(6): Decommissioning Plan
    - A. All structures and foundations associated with the large-scale solar energy systems shall be removed to a depth of 36 inches;
    - B. All disturbed ground surfaces shall be restored to original conditions, including topsoil and seeding as necessary;

- C. All electrical systems shall be properly disconnected, and all cables and wiring buried less than 36 inches in depth shall be removed; and
- D. A bond or other approved security shall be provided to cover the cost of removal and restoration of the area impacted by the solar energy system. Security shall be in an amount equal to 150% of the construction estimate as presented in the approved decommissioning plan.

- § 247-68.22. Large-scale solar energy systems design criteria
  - A. Design of large-scale solar energy systems shall meet the following conditions:
    - (1) Setbacks.
      - (a) A minimum of 200 feet from any property lot line.
      - (b) A minimum of 250 feet from any building or structure on any adjacent lot; and
      - (c) A minimum of 500 feet from any dwelling.
      - (d) A minimum of 200 feet from any public road or railroad (measured from the road right-of-way or property line); and
      - (e) A minimum of 750 feet from all property lot lines bordering a school or public park.
    - (2) Maximum overall height. The height of a large-scale solar energy system shall not exceed 20 feet when oriented at maximum tilt.
    - (3) Number of large-scale solar energy systems allowed per lot. There shall be allowed only one large-scale solar energy system per lot.
      - (a) Minimum lot area shall be 15 acres.
      - (b) Maximum lot area shall be 100 acres.
      - (c) The solar energy system, when located in CO1, CO2, L1, or SL1, shall be included and be subject to the maximum lot coverage allowable under the zoning district where it is located. The total surface area of a solar energy system situated in R1 and R2 shall not exceed 10% of the total square footage of the entire lot.
    - (4) All structures and devices used to support solar collectors shall be nonreflective and/or painted a subtle or earth tone color.
    - (5) All transmission lines and wiring associated with a large-scale solar energy system shall be buried and include necessary encasements in accordance with the National Electric Code and Town requirements. The applicant is required to show the locations of all proposed overhead and underground electric utility lines, including substations and junction boxes and other electrical components for the project on the site plan.

Town of Cambria

LOCAL LAW NO. 1 OF THE YEAR, 2015

I. Large-Scale and Utility-Scale Solar Energy Systems

- § 3. Permits and Approvals Required and Applicable Zoning Districts
    - C. Large-scale and utility-scale solar energy systems shall not be a permitted use on a lot in any zoning district other than the Industrial I-I or Planned Development P--D zoning districts
- § 5. General Provisions
    - A. Application requirements for utility-scale solar
        - (1) Adherence to all applicable Town of Cambria building, plumbing, electrical, and fire codes.
        - (2) No adverse impact on fish, wildlife, or plant species or their critical habitats, or other significant habitats identified by the Town of Cambria or other federal or state regulatory agencies.
        - (3). Reflection of solar arrays
        - (4) All structures and devices nonreflective and/or painted
        - (5) All transmission lines and wiring associated with a solar energy system shall be buried and include necessary encasements in accordance with the National Electric Code and Town requirements. The Planning Board may recommend waiving this requirement if sufficient engineering data is submitted by the applicant -to demonstrate that underground transmission lines are not feasible or practical.
        - (6) Compliance with utility company's requirements for interconnection.
        - (7) Artificial lighting of solar energy systems shall be limited to lighting required for safety and operational purposes and shall be shielded from all neighboring properties and public roads.
        - (8) Compliance with the Town's signage regulations.
        - (9) Lot requirements.
        - (10) Bulk and siting requirements.
        - (11) Setbacks
        - (12) Skyspace requirements
        - (13) Soil re-seeding
    - B. Additional Criteria for Applications for utility-scale solar energy systems
        - (2) Any site containing a utility-scale solar energy system shall contain fencing or other enclosure acceptable to the Town

- (3) A berm, landscape screen, or other opaque enclosure, or any combination thereof acceptable to the Town capable of screening the site, shall be provided along any property line that abuts an existing residence or any property zoned other than Industrial I-1 or Planned Development P-D.

Niagara County

- Local Law No. 5 of 2007 – Stormwater Management and Erosion and Sediment Control

(e) List of Substantive Local Ordinances/Laws That the Applicant Requests the Board Not Apply

The Applicant agrees to provide the information required by 1001.31(e). The Applicant will work with the municipalities to identify those substantive local laws that are unduly burdensome, if any, and provide justification to the Board in the Article 10 Application to support its request for a waiver of any such local laws or ordinances.

(f) List of Procedural Local Ordinances/Laws Related to Use of Water, Sewer, or Telecommunication Lines

A list and copies, in electronic form, of any local ordinances, laws, resolutions, regulations, standards and other requirements applicable to the Project's interconnections in public rights-of-way, if any, that are of a procedural nature.

(g) Local Ordinances/Laws Related to Use of Water/Sewer that the Applicant Requests the Board Not Apply

The Facility is not anticipated to require any physical connections for water, sewer, or telecommunication lines. As such, the Applicant has not identified any substantive local ordinances or laws related to the interconnection of water, sewer, or telecommunications lines that are applicable to the Facility. In the event such changes are determined to be needed, they will be addressed in the Application.

(h) List of Local Procedural and Substantive Requirements Applicable to the Interconnection to or Use of Water, Sewer, Telecommunication and Steam Lines in Public Rights of Way that the Applicant Requests the Siting Board Not Apply

Since the Facility is not anticipated to require any physical connections to water or sewer lines, the Applicant has not identified any local laws or ordinances that it anticipates requesting that the Board not apply. In the event such connections are determined to be needed, relevant standards will be addressed in the Application.

(i) Summary Table of Local Substantive Requirements

The Article 10 Application will provide a summary table that has two columns, one consisting of applicable substantive requirements to the Facility and the second containing a description of how the Applicant plans to adhere to those requirements. To the extent that the Applicant intends to seek relief from substantive local zoning requirements, the

Application will identify those requirements and explain why they would be unreasonably burdensome as applied to the Facility.

(j) Zoning Designation

An identification of the zoning designation or classification of all lands constituting the site of the proposed Facility and a statement of the language in the zoning ordinance or local law by which it is indicated that the proposed Facility is a permitted use at the proposed site. If the language of the zoning ordinance or local law indicates that the proposed Facility 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.

2.32 STATE LAWS AND REGULATIONS

Throughout project conceptualization and filing of the PSS, the Applicant has consulted with state agencies and authorities to identify additional potentially applicable statutory or regulatory requirements for the Facility, the results of which will be contained in Exhibit 32 to the Application. The Applicant will continue to consult with relevant state agencies and authorities throughout the Article 10 process to ensure that the list of laws and regulations contained in this exhibit, and eventually the Application, represent a complete and accurate list. The Applicant intends to comply with all applicable requirements unless specifically requested that the Siting Board relieve the Applicant of its obligation to do so.

(a) List of State Approvals, Consents, Permits, Certificates, or Other Conditions of a Procedural Nature

The Applicant has compiled a preliminary listing of state approvals, consents, permits, or other conditions of a procedural nature required for the construction or operation of the proposed Facility. These approvals, consents, permits and other conditions are as summarized below in Table 2.

Table 2. List of All State Approvals for the Construction and Operation of the Facility that are Procedural in Nature and supplanted by PSL Article 10

STATE AGENCY	REQUIREMENT	LAW OR REGULATION	DESCRIPTION
New York State Department of Environmental Conservation	Water Quality Certification (WQC)	Section 401 of the Clean Water Act	The request for a 401 WQC will not be filed until a federal U.S. ACE permit application is filed (if necessary). Under the Siting Board regulations, the WQC will be issued by the Siting Board.
New York State Office of Parks, Recreation, and Historic Preservation (OPRHP)	Consultation Pursuant to of the New York State Historic Preservation Act	Parks, Recreation and Historic Preservation Law §14.09	The Applicant has initiated (and will continue) consultation with the NYSOPRHP to ensure compliance with §14.09 of the New York State Historic Preservation Act.
New York State Department of Environmental Conservation	Endangered and Threatened Incidental Take Permit	Article 11, 6 NYCRR Part 182	The NYSDEC may issue a license or permit to "take" any species listed as endangered or threatened. This permit may be required if, in consultation with state agencies, it is determined that the project could result in incidental take of any state-listed endangered or threatened fish or wildlife species from occupied habitat. If this permit is required, the procedural requirements are supplanted by Article 10.
New York State Department of Environmental Conservation	Permit for Protection of Waters	Article 15, 6 NYCRR Part 608	This permit would be required for the crossing of protected streams by Facility components. Protected streams are particular portions of streams designated by the NYSDEC with one of the following classifications: AA, AA(t), A, A(t), B, B(t) or C(t). The permit is required for any change, modification, or disturbance of any

STATE AGENCY	REQUIREMENT	LAW OR REGULATION	DESCRIPTION
			protected streams, streambeds, or stream banks. If this permit is required, the procedural requirements are supplanted by Article 10.
New York State Department of Environmental Conservation	Permit for Freshwater Wetlands	Article 24, 6 NYCRR Part 663	This permit would be required for the crossing or disturbance of regulated freshwater wetlands or adjacent areas by Facility components. Regulated freshwater wetlands are designated and mapped by the NYSDEC, and are generally 12.4 acres or larger. Around every regulated freshwater wetland is an adjacent area of 100 feet that is also regulated to provide protection for the wetland. If this permit is required, the procedural requirements are supplanted by Article 10.
New York State Department of Environmental Conservation	SPDES General Permit for Construction Activity	ECL Article 17, Title 8 6 NYCRR Part 750	This permit is required for construction projects that disturb one or more acres of soil. In accordance with 16 NYCRR 1001.32(a) this is identified as a state procedural requirement issued by the NYSDEC pursuant to federal recognition of state authority. This approval is subject to review by the NYSDEC independent of the Article 10 process.
New York State Public Service Commission	Certificate of Public Convenience and Necessity	NY PSL §68	No electric corporation shall begin construction of an electric plant, having a generating capacity of at least 80 MW, without first having obtained the permission and approval of the commission.

As indicated above, certain state procedural requirements may be preempted by PSL Article 10 unless the Board expressly authorizes the exercise of such authority by the state agency. Preemption does not extend to permits issued by the NYSDEC pursuant to Federal recognition of state authority or through delegated programs pursuant to 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.

Table 3. List of All State Approvals Related to the Construction of the Facility to be Obtained from Issuing Agency

New York State Department of Transportation	Highway Work Permit NYS Highway Law, Article 3, Section 52	A high way work permit may be required by the New York State DOT. This includes permits for crossing state highways, use highway for access, or for curb cuts, which are not supplanted by Article 10.

As indicated in the chart above, the Applicant anticipates requesting that the Siting Board authorize the NYSDOT to issue the applicable highway work permit(s) and other ministerial permit(s) associated with road work in State highways or rights-of-ways. The Applicant will provide an additional explanation of why such an authorization would be desirable and/or appropriate in the Article 10 Application.

(b) List of Procedural State Approvals/Permits/Etc. that the Applicant Requests the Board Not Apply

The Applicant does not anticipate requesting waiver of any state approvals.

(c) List of State Approvals, Consents, Permits, Certificates, or Other Conditions of a Substantive Nature

The Applicant will construct and operate the Facility in a manner that conforms to all State substantive requirements for those approvals, consents, permits, certificates, or other conditions. The following is a list of all substantive state requirements:

- Water Quality Certification (WQC), Section 401 of the Clean Water Act 6 NYCRR Part 621.4e (Water Quality Certifications in Accordance with Section 401 of the Clean Water Act)
- Consultation Pursuant to Section14.09 of the New York State Historic Preservation Act
- Permit for Protection of Waters, Article 15, 6 NYCRR Part 608.7b (Permit Application Review) and 608.8 (Standards)
- Permit for Freshwater Wetlands, Article 24, 6 NYCRR Part 663.5 (Standards for Issuance of Permits and Letters of Permission)
- SPDES General Permit for Construction Activity, Article 3, 6 NYCRR Part 750-1.11 (Application of Standards, Limitations, and other Requirements)

(d) Summary Table of Substantive State Requirements

The substantive state requirements preliminarily identified above in (c) will be presented in a table in the Article 10 Application.

(e) State Approvals/Permits/Etc. for Offsite Features Not Encompassed by Major Electric Generating Facility

Based on current designs, the Applicant does not anticipate that there will be any offsite features not encompassed by the major electric generating facility. To the extent that offsite ancillary features are identified, a list of all state approvals, consents, permits, certificates, or other conditions for the construction or operation of said offsite ancillary features will be listed in the Article 10 Application.

2.33 OTHER APPLICATIONS AND FILINGS

This section of the Application will describe any submissions and filings which do not fall within the jurisdiction of the Siting Board but are needed or related to the construction or operation of the proposed Facility. In this case, such filings are limited to federal permits and approvals which will be required for the Facility, but which must be issued by federal agencies, and not by the State Siting Board.

To the extent available, this section of the Application will also make note of awards or power purchase contracts the Facility has received for sale of the energy produced or renewable attributes related thereto.

Exhibit 33 of the Application will contain the information consistent with the requirements of 1001.33 of the Article 10 Regulations

2.34 ELECTRIC INTERCONNECTION

Interconnection of the Facility to the electric transmission system will be achieved using multiple systems. The PV modules themselves produce power at a low voltage, which is converted from direct current DC to AC at the inverters. Transformers will be sited near the inverter locations to convert the AC electricity to the medium voltage collection system level. Energy storage devices may be constructed and will be sited internal to the panel arrays. The medium voltage collection system comprised of underground or above-ground cables and featuring numerous circuits in parallel, connects the PV inverters to a collection substation. The collection substation then transforms the electricity voltage up to 115 kV and delivers the power through a 115-kV generation tie line to a POI substation, which will be constructed either by the Applicant, meeting design specifications offered by National Grid, or by National Grid. The POI substation connects the Facility to the National Grid transmission system.

The types, design standards, and descriptions of the electric interconnection components will be included in the Article 10 Application. Direct burial methods through use of a cable plow, rock saw, rock wheel trencher and/or similar equipment may be used during the installation of any underground electrical collection system. Direct burial will involve the installation of cable directly into a "rip" in the ground created by the plow, saw blade or rock wheel. The rip may disturb an area up to approximately 36 inches wide with bundled cable installed to a minimum depth of 36 inches in most areas, and 48 inches in active agriculture and pasture lands. Sidecast material will be replaced with a small excavator or small bulldozer. All areas will be returned to approximate pre-construction grades and restored.

On overhead sections of the collection line (if any), typical utility-grade ceramic/porcelain or composite/polymer insulators, designed and constructed in accordance with ANSI C29, are anticipated to be used. Any overhead lines will use typical dimensions and construction materials of the support structures will be presented in the Article 10 Application.

Consistent with the requirements of 1001.34 of the Article 10 Regulations, Exhibit 34 of the Application will contain the following information:

(a) Design Voltage and Voltage of Initial Operation

The design voltages of the system will be described in the Article 10 Application, including the maximum DC voltage of the PV array, the output voltage of the inverters, the medium voltage collection system voltage, and the Point of Interconnection voltage. Proposed transformer tap settings and operating voltage ranges will be provided.

(b) Type, Size, Number, and Materials of Conductors

The length of the collection system, broken down by anticipated length of overhead (if any) and underground lines, will be described in the Article 10 Application. The underground system will be comprised of numerous cable sections in parallel, connecting each of the PV arrays to the inverter, then to the collection substation. Typical details related to conductors will also be included.

(c) Insulator Design

The Applicant agrees to provide the information required by 1001.34(c).

(d) Length of the Transmission Line

The Applicant agrees to provide the information required by 1001.34(d). As indicated above, a 115-kV transmission line will span a short distance from the collection substation to the POI substation. At this time, it is currently anticipated that this line will be less than 0.5 miles.

(e) Typical Dimensions and Construction Materials of the Towers

The Applicant agrees to provide the information required by 1001.34(g).

(f) Design Standards for Each Type of Tower and Tower Foundation

The Applicant agrees to provide the information required by 1001.34(g).

(g) Type of Cable System and Design Standards for Underground Construction

The Applicant agrees to provide the information required by 1001.34(g).

(h) Profile of Underground Lines

A typical drawing of the underground collection cable and associated material will be provided in the Article 10 Application.

(i) Equipment to be Installed in Substations or Switching Stations

The POI substation and collection substation equipment will be described in the Article 10 Application. The Article 10 Application will include a plan/overview of the POI substation and the collection substation.

(j) Any Terminal Facility

The only terminal facilities expected are the POI substation and the collection substation and will be described/shown above in section (i).

(k) Need for Cathodic Protection Measures

The Applicant agrees to provide the information required by 1001.34(k).

2.35 ELECTRIC AND MAGNETIC FIELDS

The information presented in Exhibit 35 of the Article 10 Application will be derived from an electric and magnetic field (EMF) study to be prepared for the Bear Ridge Solar Facility. The EMF Study will identify segments of electrical lines that will have unique electric and magnetic field characteristics, will identify these segments on aerial photos or drawings, and will indicate the distance to the nearest residence or occupied building in each right-of-way (ROW) segment. The EMF Study will also model the strength and locations of electric and magnetic fields that will be generated by the Facility.

Consistent with the requirements of 1001.35 of the Article 10 Regulations, Exhibit 35 of the Article 10 Application will include:

(a) Every Right-of-way Segment Having Unique Electric and Magnetic Field Characteristics

The Application will identify each ROW segment with unique EMF characteristics, which will be evaluated in the EMF study.

(b) For Each Right-of-way Segment, Base Case and Proposed Cross Sections Showing:

- (i) any known overhead electric transmission, sub-transmission, and distribution facilities showing structural details and dimensions and identifying phase spacing, phasing, and any other characteristics affecting EMF emissions;
- (ii) any known underground electric transmission, sub-transmission (i.e., 34.5 kV collection system), and distribution facilities;
- (iii) ROW boundaries; and
- (iv) structural details and dimensions for all structures (dimensions, phase spacing, phasing, and similar categories) and an overview map showing locations of structures.

(c) Enhanced Aerial Photos/Drawings Showing Exact Locations of Each:

Any residences or occupied buildings within the ROW segments will be shown on aerial photos. If no residence or occupied building is within the ROW segments, the measurement of the distance between the edge of the ROW segment and the nearest residence or occupied building will be provided.

(d) Electric and Magnetic Field Study

The Application will include an EMF study with calculation tables and field strength graphs calculated at one meter above ground level with five-foot measurement intervals depicting the width of the entire ROW and out to 500 feet from the edge of the ROW on both sides for each unique ROW cross section. The EMF Study will also include:

(i) Licensed Professional Engineer

The Applicant agrees to provide the information required by 1001.35(d)(1).

(ii) Computer Software Program

The Applicant agrees to provide the information required by 1001.35(d)(2).

(iii) Electric Field Calculation Tables and Field Strength Graphs

The EMF study will model the strength and locations of electric fields to be generated by the Facility. Modeling will be conducted at rated voltage, and the measurement location and interval will be described in the Article 10 Application. Electric field strength graphs depicting electric fields along the width of the entire ROW and out to the property boundary of the Facility will be included in the EMF study. Digital copies of all input assumptions and outputs for the calculations will be provided under separate cover.

(iv) Magnetic Field Calculation Tables and Field Strength Graphs

The EMF modeling will be conducted at rated voltage, and the measurement location and interval will be described in the Application. There is no expected change in amperage under any of the following conditions: summer normal, summer short term emergency, winter normal, and winter short term emergency. Therefore, the magnetic field modeling to be performed will be applicable to any of these conditions. Magnetic field strength graphs depicting magnetic fields along the width of the entire ROW and out to the property boundary of the Facility will be included in the EMF study. Digital copies of all input assumptions and outputs for the calculations are being filed under separate cover.

(v) Magnetic Field Calculation Tables and Field Strength Graphs for Maximum Annual Load within 10 Years

There is no expected change in amperage in maximum average load initially versus for 10 years after initiation of operation. Therefore, the modeling of magnetic fields described above in 1001.35(d)(4) (including both the graphs and tables included in the EMF study) will be applicable to both initial operation and operation after 10 years.

(vi) Base Case Magnetic Field Calculation Tables and Field Strength Graphs

The Applicant agrees to provide the information required by 1001.35(d)(6).

2.36 GAS INTERCONNECTION

The proposed Facility will not require gas interconnection facilities, and as such, the requirements of 1001.36 are not applicable and will not be included in the Article 10 Application.

2.37 BACK-UP FUEL

The proposed Facility will not require back-up fuel, and as such, the requirements of 1001.37 are not applicable and will not be included in the Article 10 Application.

2.38 WATER INTERCONNECTION

The proposed Facility will not require water interconnection facilities, and as such, the requirements of 1001.38 are not applicable and will not be included in the Article 10 Application.

2.39 WASTEWATER INTERCONNECTION

The proposed Facility will not require wastewater interconnection facilities, and as such, the requirements of 1001.39 are not applicable and will not be included in the Article 10 Application.

2.40 TELECOMMUNICATIONS INTERCONNECTION

Telecommunications interconnections may be required to support the interconnection of the Facility. Electrical protection of the transmission line the project will interconnect to will require telecommunications, and the details of the telecommunication requirements will be developed in the NYISO Facilities Study. Existing public cellular and broadband networks, and existing National Grid telecommunication facilities will be utilized to the extent possible.

Consistent with the requirements of 1001.40 of the Article 10 regulations, Exhibit 40 of the Application will contain the following information:

(a) Operational Data Transmitted to NYISO

The detailed requirements for transmitting the Facility's operational generating data to NYISO will be developed in the NYISO Facilities Study and will likely be via a splice of existing fiber-optic shield wire on the transmission line, new Optical Ground Wire (OPGW) or All-Dielectric Self-Supporting (ADSS) fiber on the transmission line, or via third-party broadband. The transmitted information will include generation data (MW output, MVAR, and any curtailment) and environmental data. The Article 10 Application will provide additional information on the Facility's meter location, the means of providing the operational data to National Grid, and the secure communications network for this operational data.

(b) Telecommunications Interconnection Capacity

The Applicant will provide the information required by 1001.40(b).

(c) Status of Negotiations

Negotiations with communications providers have not yet been initiated for the Facility because at this time, no such agreements have been identified as necessary. If it is determined that third party communications are required, the status will be discussed in the Article 10 application.

2.41 APPLICATIONS TO MODIFY OR BUILD ADJACENT

The Applicant is not proposing to modify or build adjacent to an existing facility, and as such, the requirements of this exhibit are not applicable and will not be included in the Article 10 Application.

3.0 SUMMARY AND CONCLUSIONS

This Preliminary Scoping Statement has been prepared in order to outline the scope and methodology of studies being performed for the Facility, which will generate up to 100 MW-AC of renewable energy with no emissions of pollutants, including greenhouse gases, to the atmosphere, and without the need for the use of significant quantities of water. Proposed Facility components include PV modules, mounting systems, underground or overhead collection lines, inverters, energy storage if economically feasible, a collection substation, a point of interconnection (POI) substation, access roads (gravel or other low impact surface), fencing, and temporary laydown/construction areas. This document has been prepared to facilitate an understanding of the proposed Facility, to further solicit input from the various stakeholders, and to satisfy the requirements of 1000.5(l) of the Article 10 Regulations.

The proposed Facility is a utility-scale solar project located in Niagara County, New York in the Towns of Cambria and Pendleton. The proposed Facility Area boundary (see Figure 2) consists of approximately 2,600 acres of private land, including a mix of post-agricultural and forest land. The Facility components will have a footprint of approximately 650 acres within the proposed Facility Area boundary. Portions of the remaining acreage within the Facility Site boundary will be used for proposed pollinator habitat and cultural resource preservation, reserved for wetland conservation, utilized as buffer areas, or for screening.

The Applicant prepared a Public Involvement Program (PIP) plan in accordance with 16 NYCRR § 1000.4. The initial draft of the PIP was submitted to the Siting Board on June 5, 2018, comments on the PIP were received from the New York State Department of Public Service (DPS) on July 5, 2018, and the PIP was updated, finalized and filed by the Applicant on October 10, 2018. The PIP, as well as electronic copies of this PSS and other case documents, can be accessed, viewed and downloaded on the online case record maintained by the Siting Board and on the Facility-specific website maintained by the Applicant:

- http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=18-F-0338&submit=Search
- www.bearridgesolar.com

Bear Ridge Solar has an office at 3402 Pico Blvd Santa Monica, CA 90405, and is currently looking for a localized office location in the City of Lockport. The Applicant has also held several public meetings/open houses, which provided answers to questions local residents and stakeholders had.

The Applicant has provided paper copies of all major filings, as well as documents presented at the open houses, at the following repositories:

- Sanborn-Pekin Free Library (Sanborn)
- Lockport Public Library (Lockport)
- Town of Pendleton Town Hall
- Town of Cambria Town Hall

Following submission of this PSS, stakeholders and members of the public will have an opportunity to review and comment on the document, and the Applicant will formally respond to those comments by filing a PSS Comment Response. Within 60 days of this PSS filing, a pre-application conference will be held in the vicinity of the proposed Facility, at which time the Presiding Examiners will consider requests for intervenor funding from municipalities and qualified local parties and will authorize the commencement of the voluntary pre-application stipulations process. The Applicant would then continue to implement studies, outreach efforts, and gather information for the preparation of the Bear Ridge Solar Article 10 Application.

During the time before the submission of the Article 10 Application, the Applicant intends to continue stakeholder outreach. The Applicant has conducted a mailing to members of the master stakeholder list, including host and adjacent landowners, just prior to the submission of the PSS to provide an update on the Facility and invite comments and remind the stakeholders of the comment period timeframe. The Applicant will continue to attend municipal meetings and will hold at least one additional open house prior to submitting the Article 10 Application. Finally, the Applicant will also attempt to identify additional community events in which it would participate. All outreach efforts will be tracked in the meeting logs.

Section 2.0 (Content of Application) of this PSS has been organized in accordance with the Article 10 Regulations which govern the format and contents of the Article 10 Application, 16 NYCRR § 1001 (Content of an Application). Specifically, all sub-sections of Section 2.0 correspond directly to 16 NYCRR § 1001 (e.g., Section 2.1 corresponds to 16 NYCRR § 1001.1, Section 2.2 corresponds to 16 NYCRR § 1001.2, etc.). These subsections of the PSS identify numerous Facility-specific support studies that will be conducted and included in the Article 10 Application.

Finally, as previously indicated, the Applicant has prepared a content matrix to allow for a comparison of the content of this document with the requirements of 1000.5(l), which is provided in Table 4.

Table 4. Comparison of Contents of this PSS with the Requirements of 16 NYCRR § 1000.5(l)

16 NYCRR Section 1000.5(l)	Requirement	Corresponding Section of the Bear Ridge Solar PSS	Notes
Section 1000.5 (l)(1)	As much information as is reasonably available concerning the proposed facility, generally in the form (though in less detail) that it will appear in the application;	Section 2.0	This Section, and all associated subsections, of the PSS contain reasonably available information related to existing conditions, potential impacts and minimization/mitigation.
Section 1000.5 (l)(2)	A preliminary scope of an environmental impact analysis containing a brief discussion, on the basis of reasonably available information, of the following items:	Section 1.4	This section includes general information regarding Project-related impacts.
Section 1000.5 (l)(2)(i)	A brief description of the proposed facility and its environmental setting;	Section 1.1, 2.4, 2.21, 2.22, and 2.23	Section 2.1 provides a brief description of the Project, while Sections 2.4, 2.21, 2.22, and 2.23 provide a brief description of its environmental setting.
Section 1000.5 (l)(2)(ii)	Potentially significant adverse environmental and health impacts resulting from the construction and operation of the proposed facility including also an identification of particular aspects of the environmental setting that may be affected, including any material impacts or effects identified in consultations by the public, affected agencies, and other stakeholders, and a responsive analysis by the Applicant as to those issues identified in consultations;	Section 1.4, 2.15, 2.17, 2.21, 2.22, 2.23, 2.24, and 2.25	Section 1.4 includes general information regarding Project-related impacts, Sections 2.15 and 2.17 provide information regarding potential health impacts, and Sections 2.21 2.22, 2.23, 2.24, and 2.25 provide information regarding potential environmental impacts. As of the date of the filing of this PSS, no material impacts have been identified during any consultations.
Section 1000.5 (l)(2)(iii)	The extent and quality of information needed for the application to adequately address and evaluate each potentially significant adverse environmental and health impact, including existing and new information where required, and the methodologies and procedures for obtaining the new information;	Section 2.0	This Section, and all associated subsections, identify the extent and quality of information that is proposed to be included in the Article 10 Application, including numerous stand-alone support studies.
Section 1000.5 (l)(2)(v)	A description of how the applicant proposes to avoid adverse impacts to the environment and health;	Section 1.4, 2.15, 2.17, 2.22, 2.23, 2.24, and 2.25	Section 1.4 includes general information regarding Project-related avoidance, minimization and mitigation measures, Sections 2.15 and 2.17 describe avoidance, minimization and mitigation measures associated with health impacts, and Sections 2.22, 2.23, 2.24, and 2.25 describe avoidance, minimization and mitigation measures associated with environmental impacts.
Section 1000.5 (l)(2)(vi)	For those adverse environmental and health impacts that cannot be reasonably avoided, an identification of measures proposed to mitigate such impacts;	see above	see above

16 NYCRR Section 1000.5(l)	Requirement	Corresponding Section of the Bear Ridge Solar PSS	Notes
Section 1000.5 (l)(2)(vii)	Where it is proposed to use petroleum or other back-up fuel for generating electricity, a discussion and/or study of the sufficiency of the proposed on-site fuel storage capacity and supply;	Not applicable to this Project	
Section 1000.5 (l)(2)(viii)	A description and evaluation of reasonable and available alternative locations for the proposed facility, including a description of the comparative advantages and disadvantages of the proposed and alternative locations, except that a private facility applicant may limit its description and evaluation of alternative locations to parcels owned by, or under option to, such private facility applicant or its affiliates;	Section 2.9	
Section 1000.5 (l)(2)(ix)	If the proposed facility affects any land or water use or natural resource of the coastal area and federal authorization or funding is necessary, a preliminary analysis of the consistency of the proposed facility with the enforceable policies of the New York State coastal management program or, where the action is in an approved local waterfront revitalization program area, with the local program;	Not applicable to this Project	
Section 1000.5 (l)(2)(x)	A statement of the reasons why the primary proposed location and source, taking into account the potentially significant and adverse environmental impacts, is best suited, among the alternatives, including a "no action" alternative, to promote public health and welfare, including the recreational and other concurrent uses that the site may serve, except that a private facility applicant may limit its description and evaluation of alternative locations to parcels owned by, or under option to, such private facility applicant or its affiliates and its description and evaluation of alternative sources to those that are reasonable alternatives to the proposed facility that are feasible considering the objectives and capabilities of the sponsor;	Section 2.9	
Section 1000.5 (l)(2)(xi)	A preliminary identification of the demographic, economic and physical attributes of the community in which the facility is proposed to be located and in which any alternative location identified is located, and a preliminary environmental justice evaluation of significant and adverse disproportionate environmental impacts of the proposed facility and any alternative facility identified that would result from construction and operation considering, among other things, the cumulative impact of existing sources of emissions of air pollutants and the projected emission of air pollutants from the proposed or alternative facility in a manner that	Sections 2.27 and 2.28	Section 2.27 provides demographic information for the host towns, while Section 2.28 specifically address Environmental Justice, including identification of the nearest Potential Environmental Justice Area

16 NYCRR Section 1000.5(l)	Requirement	Corresponding Section of the Bear Ridge Solar PSS	Notes
	is in accordance with any requirements for the contents of an Article 10 preliminary scoping statement contained in 6 NYCRR Part 487 promulgated by the DEC for the analysis of environmental justice issues;		
Section 1000.5 (l)(2)(xii)	An identification of any other material issues raised by the public and affected agencies during any consultation and the response of the applicant to those issues.	Appendix B	As of the date of filing this PSS, several issues have been raised by the public or affected agencies, including zoning, property values, loss of agricultural lands, and energy distribution. These issues have been captured in this PSS and will be further addressed in the Article 10 Application.
Section 1000.5 (l)(3)	An identification of all other state and federal permits, certifications, or other authorizations needed for construction, operation or maintenance of the proposed facility;	Sections 2.32 and 2.33	Section 2.32 addresses state laws and regulations, which Section 2.33 addresses anticipated federal permits and approvals.
Section 1000.5 (l)(4)	A list and description of all state laws and regulations issued there under applicable to the construction, operation or maintenance of the proposed facility and a preliminary statement demonstrating an ability to comply;	Section 2.32	Section 2.32 addresses state laws and regulations.
PSL 1000.5(l)(5)	A list and description of all local laws, and regulations issued thereunder, applicable to the construction, operation, or maintenance of the proposed facility and a statement either providing a preliminary assessment of an ability to comply or indicating specific provisions that the applicant will be requesting the Board to elect not to apply, in whole or in part, and a preliminary explanation as to why the Board should elect not to apply the specific provisions as unreasonably burdensome in view of the existing technology or the needs of, or costs to ratepayers whether located inside or outside of such municipality;	Section 2.31	Section 2.31 addresses local laws and ordinances.
PSL 1000.5 (l)(6)	A description of the applicant, its formation, status, structure, holdings, affiliate relationships, powers (including whether it has or will seek to obtain the power of eminent domain, either directly or indirectly), franchises and consents;	Section 2.1	Section 2.1 describes the applicant, including the type of business and its formation. The Applicant does not plan to seek to obtain the power of eminent domain.
PSL 1000.5 (l)(7)	A description of the applicant's property rights and interests or those it proposes to acquire to all lands of the proposed facility and any private or public lands or private or public streets, highways or rights-of-way crossed by any interconnections necessary to serve the facility such as, but not limited to, electric lines, gas lines, water supply lines, waste water or other sewage treatment facilities, communications and relay facilities, access driveways, rail facilities, or steam lines; and	Section 2.13	Section 2.13 provides information regarding the applicant's property rights and interests.

16 NYCRR Section 1000.5(l)	Requirement	Corresponding Section of the Bear Ridge Solar PSS	Notes
PSL 1000.5 (l)(8)	Any other information that the Applicant may deem to be relevant.	Entire PSS	Any other information deemed relevant by the Applicant has been included in the PSS.