

# **Preliminary Scoping Statement Pursuant to Article 10 of the New York State Public Service Law**

## **High River Energy Center**

Town of Florida, Montgomery County, New York

**Case No.: 17-F-0597**

**Applicant:**

**High River Energy Center, LLC  
700 Universe Boulevard, FEW/JB  
Juno Beach, FL 33408  
Contact: Keddy Chandran  
Keddy.Chandran@nexteraenergy.com  
Office: (561) 691-7274**



**Prepared by:**

**TRC Companies, Inc.  
225 Greenfield Parkway, Suite 102  
Liverpool, NY 13088  
Contact: Samantha Kranes  
SKranes@trcsolutions.com  
Office: (315) 362-2415**



**November 2018**



## TABLE OF CONTENTS

1.0 Introduction.....	1
2.0 Applicant and Project Description .....	2
2.1 Company Profile .....	2
2.2 Project Description .....	3
2.3 Project and Study Area .....	4
2.4 Summary of Pre-Application Activities.....	5
2.5 Organization of the Preliminary Scoping Statement .....	6
3.0 Contents of Application.....	7
3.01 General Requirements - Public Contact and Project Information (Exhibit 1) ...	7
3.02 Overview and Public Involvement (Exhibit 2) .....	9
3.03 Location of Facilities (Exhibit 3).....	13
3.04 Existing Land Use and Project Planning (Exhibit 4) .....	16
3.05 Electric Systems Effects (Exhibit 5) .....	22
3.06 Wind Power Facilities (Exhibit 6) .....	29
3.07 Natural Gas Power Facilities (Exhibit 7) .....	30
3.08 Electric System Production Modeling (Exhibit 8).....	31
3.09 Applicable, Reasonable and Available Alternatives (Exhibit 9) .....	33
3.10 Consistency with State Energy Planning Objectives (Exhibit 10).....	37
3.11 Preliminary Design Drawings (Exhibit 11) .....	40
3.12 Construction (Exhibit 12) .....	43
3.13 Real Property (Exhibit 13).....	48
3.14 Cost of Facilities (Exhibit 14).....	50
3.15 Public Health and Safety (Exhibit 15) .....	52
3.16 Pollution Control Facilities (Exhibit 16).....	56
3.17 Air Emissions (Exhibit 17).....	57
3.18 Safety and Security (Exhibit 18).....	59
3.19 Noise and Vibration (Exhibit 19).....	63
3.20 Cultural Resources (Exhibit 20).....	76
3.21 Geology, Seismology, and Soils (Exhibit 21) .....	89
3.22 Terrestrial Ecology and Wetlands (Exhibit 22) .....	102
3.23 Aquatic Ecology and Water Resources (Exhibit 23).....	113
3.24 Visual Impacts (Exhibit 24).....	124
3.25 Effects on Transportation (Exhibit 25).....	133
3.26 Effects on Communication (Exhibit 26) .....	138
3.27 Socioeconomic Effects (Exhibit 27) .....	141
3.28 Environmental Justice (Exhibit 28).....	147
3.29 Site Restoration and Decommissioning (Exhibit 29).....	149
3.30 Nuclear Facilities (Exhibit 30) .....	152
3.31 Local Laws and Ordinances (Exhibit 31) .....	153
3.32 State Laws and Regulations (Exhibit 32) .....	165
3.33 Other Applications and Filings (Exhibit 33) .....	169

3.34	<i>Electric Interconnection (Exhibit 34)</i> .....	171
3.35	<i>Electric and Magnetic Fields (Exhibit 35)</i> .....	173
3.36	<i>Gas Interconnection (Exhibit 36)</i> .....	176
3.37	<i>Back-up Fuel (Exhibit 37)</i> .....	177
3.38	<i>Water Interconnection (Exhibit 38)</i> .....	178
3.39	<i>Wastewater Interconnection (Exhibit 39)</i> .....	179
3.40	<i>Telecommunications Interconnection (Exhibit 40)</i> .....	180
3.41	<i>Applications to Modify or Build-Adjacent (Exhibit 41)</i> .....	181
4.0 Summary and Conclusions .....		182
5.0 References .....		195

## FIGURES

- Figure 1. Regional Project Location
- Figure 2. Project Area and Study Area
- Figure 3. Available Buildable Area (Preliminary)
- Figure 4. Mapped Existing Land Use in the Study Area
- Figure 5. Existing Vegetated Cover in the Study Area
- Figure 6. Agricultural Districts in the Study Area
- Figure 7. FEMA Flood Zones in the Study Area
- Figure 8. Slopes in the Study Area
- Figure 9. Mapped Soils in the Project Area
- Figure 10. Seismic Hazard in the Project Area
- Figure 11. Groundwater Aquifers in the Study Area
- Figure 12. Mapped Water Wells in the Study Area
- Figure 13. Mapped Streams and Wetlands in the Project Area
- Figure 14. Visual Study Area
- Figure 15. Tax Assessment Jurisdiction in the Study Area

## APPENDICES

- Appendix A. PIP Meeting Log
- Appendix B. Copy of PSS Notice
- Appendix C. PIP Plan
- Appendix D. Stakeholder List
- Appendix E. USFWS IPaC Official Species List
- Appendix F. Grassland Breeding Bird Survey Site-Specific Work Plan

## 1.0 Introduction

High River Energy Center, LLC, (High River Energy Center or the Applicant) a wholly-owned indirect subsidiary of NextEra Energy Resources, LLC (NEER), plans to submit an application to construct a major electric generating facility, the High River Energy Center (the Project), under Article 10 of the Public Service Law (PSL). Pursuant to the rules of the New York State Board on Electric Generation Siting and the Environment (Siting Board), applicants proposing to submit an application to construct a major electric generating facility under Article 10 (Application) must submit a Preliminary Scoping Statement (PSS) no less than 90 days prior to filing the Application.

The Applicant has been implementing its Public Involvement Program Plan (PIP Plan) and conducting stakeholder outreach as well as consulting with local, state, and federal government agencies, and Project stakeholders. Consultations and meetings have been documented in a Meeting Log maintained by the Applicant, which will be updated and submitted to the Siting Board approximately once every two months (or as necessary) and is available on the Applicant's website ([www.highriverenergycenter.com](http://www.highriverenergycenter.com)). The most recent Meeting Log was filed with the Siting Board on November 12, 2018, and is also included with this PSS as Appendix A. The Applicant will continue to implement the PIP Plan and conduct outreach activities throughout the scoping process, during the preparation of the Application, and throughout the remainder of the Article 10 process.

The purpose of the PSS is to present "... as much information as is reasonably available concerning the proposed project..."and propose the methodology, scope of studies, or program of studies to be conducted in support of the Application to be submitted for the Project pursuant to Article 10. The required content of the PSS is prescribed in 16 NYCRR § 1000.5(l).

Pursuant to 16 NYCRR § 1000.5(g), within 21 days after the filing of this PSS, any person, agency, or municipality may submit comments on the PSS and file a copy with the Applicant and the Secretary to the Siting Board. Further details for filing comments on this PSS are provided in the Notice accompanying this document (See Appendix B for a copy of the Notice).

## 2.0 Applicant and Project Description

### 2.1 Company Profile

High River Energy Center, LLC, a limited liability company that will develop, own, operate and maintain a solar-powered wholesale generating facility in Montgomery County, New York, is a wholly-owned indirect subsidiary of NEER.

NEER is a nationally recognized clean energy provider with a portfolio totaling over 20,000 megawatts (MW) of generating capacity in the United States and Canada, of which over 2,000 MW is derived from the sun. NEER operates primarily as a wholesale power generator, providing power and environmental attributes to utilities, retail electricity providers, power cooperatives, municipal electric providers and large industrial companies. Approximately 95 percent of NEER's electricity is derived from clean or renewable sources, including solar and wind. NEER, together with its affiliated entities, is the world's largest operator of renewable energy from the wind and sun.

The High River Energy Center was selected as part of the New York State Energy Research and Development Authority (NYSERDA) 2017 Renewable Energy Standard Solicitation Request for Proposal (RESRFP 17-1) to purchase renewable energy credits from large-scale renewable energy projects. The Project will consist of a 90 MW solar energy center and will be consistent with New York State's policies promoting renewable energy goals, including the 2015 New York State Energy Plan (SEP) and the Clean Energy Standard (CES), which seeks to achieve the generation of 50 percent of the State's electricity by renewable energy sources by 2030 (50 by 30 goal).

## 2.2 Project Description

The Project will have a generating capacity of 90 MW and will be located on land either leased or purchased from owners of private property in the Town of Florida, Montgomery County, New York (Figure 1). Project facilities will include commercial-scale solar arrays, access roads, buried (and possibly overhead) electric collection lines, and electrical interconnection facilities. High River Energy Center anticipates the interconnection facilities will include a collection substation and point of interconnection (POI) switchyard, which will be transferred to National Grid to own, maintain, and operate. The proposed collection substation and POI switchyard will be located on land within the Project Area, in relative proximity to National Grid's existing Stoner – Rotterdam #12 115 kilovolt (kV) transmission line (see Figure 2), which will be connected to the POI switchyard.

The proposed Project will have positive socioeconomic impacts in the Project Area, in adjacent towns, and beyond through employment opportunities, specifically by generating construction employment. Based on similar project experience elsewhere, High River Energy Center estimates that up to approximately 250 construction jobs (peak) will be generated during the approximate nine months of construction. Local construction employment will primarily benefit those in the construction trades, including equipment operators, truck drivers, laborers, and electricians. High River Energy Center encourages local hiring to the extent practicable. Workers from outside the area who fill specialized job functions will add to the regional economy by staying in area hotels, eating in the local restaurants and shopping in Montgomery County stores. Additionally, the High River Energy Center will require two to three permanent employment positions during the operational period.

High River Energy Center will commence discussions with the Town of Florida, the Montgomery County Industrial Development Agency (IDA), and other relevant participants concerning the structure and level of a Payment In Lieu of Tax Agreement (PILOT).

## 2.3 Project and Study Area

Figure 1 shows the Regional Project Location. The Project Area and the Study Area to be used for analysis are shown on Figure 2. For purposes of this document, High River Energy Center is defining these areas as follows:

- The Project Area is comprised of the locations being evaluated for placement of permanent Project facilities, including the proposed collection substation and POI switchyard which will interconnect to the existing transmission line. As shown in Figure 2 and Figure 3, the Project Area includes approximately 1,220 acres of land. Within the Project Area, it is anticipated that the proposed solar energy center would comprise an area of approximately 550 acres of land. Figure 3 contains the currently proposed buildable areas, which are areas that are preliminarily being considered for placement of solar arrays.
- Consistent with 16 NYCRR § 1000.2(ar), the Study Area (as shown in Figure 2) encompasses all areas within at least two miles of the property lines of the Project Area and includes approximately 19,141 acres of land (inclusive of the 1,220 acre Project Area). The Study Area includes the City of Amsterdam and Towns of Amsterdam and Florida in Montgomery County and the Towns of Rotterdam, Princeton, Duanesburg, and Glenville in Schenectady County. As a number of studies will be performed in support of the Application, some of the studies may utilize resource-specific study areas greater than the two-mile radius, as will be discussed in this PSS.

This standard terminology will be used throughout this PSS and the Application. Additionally, the Application will include a list of acronyms.



## 2.4 Summary of Pre-Application Activities

Prior to the filing of this PSS, High River Energy Center prepared a PIP Plan originally submitted to the New York State Department of Public Service (DPS) in September 2017. This document was submitted in accordance with 16 NYCRR § 1000.4. The Project was assigned Case No. 17-F-0597. Comments on the PIP Plan were received from the DPS on October 25, 2017. This document was updated, finalized, and filed on November 24, 2017. Paper copies of the PIP Plan were provided to the following locations:

- Town of Florida Town Hall, 214 Fort Hunter Road, Amsterdam, NY 12010
- Fort Hunter Free Library, 167 Fort Hunter Road, Amsterdam, NY 12010
- Amsterdam Free Library, 28 Church Street, Amsterdam, NY 12010

The PIP Plan can be accessed on the DPS online case record website maintained by the Siting Board (<http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterSeq=54551&MNO=17-F-0597>) and on a Project-specific website created and maintained by High River Energy Center ([www.highriverenergycenter.com](http://www.highriverenergycenter.com)).

## 2.5 Organization of the Preliminary Scoping Statement

This PSS has been organized in accordance with 16 NYCRR § 1001, with all sub-sections in Part 3 directly corresponding with each Exhibit that will be included in the Application (set forth in 16 NYCRR § 1001). In order to ensure compliance with 16 NYCRR § 1000.5(l), a content matrix has been created and is included in the Summary and Conclusions section (Section 4.0) of this document. This matrix cross-references the different requirements of 16 NYCRR § 1000.5(l) with the sections applicable to this PSS.

The information presented in this PSS is preliminary in nature and presents information on the design of the Project as is reasonably available in its early stages of development. As the Project is advanced, the Application will clearly depict all proposed solar photovoltaic array locations, along with the locations of other Project components. The linear distances of components will be presented in the Application based on the footprint that will be analyzed. Furthermore, the Application will analyze potential impacts of the proposed Project, by conducting on-site and computer-based review of the Project Area and where applicable, the Project Study Area. Figures and Appendices are referenced in the text of this PSS and presented at the end of the document.

### 3.0 Contents of Application

#### 3.01 General Requirements - Public Contact and Project Information (Exhibit 1)

The proposed High River Energy Center is located in Montgomery County, New York, within the Town of Florida, and is being developed by High River Energy Center, LLC.

Applicant: High River Energy Center, LLC  
700 Universe Blvd., FEW/JB  
Juno Beach, FL 33408  
Telephone: (800) 214-7929  
Fax: (561) 304-5404  
Email: [info@highriverenergycenter.com](mailto:info@highriverenergycenter.com)

Project Website: [www.highriverenergycenter.com](http://www.highriverenergycenter.com)

Public Contact and Designated Agent: Mr. Keddy Chandran  
700 Universe Blvd, FEW/JB  
Juno Beach, FL 33408  
Telephone: (561) 691-7274  
Fax: (561) 304-5404  
Email: [Keddy.Chandran@nexteraenergy.com](mailto:Keddy.Chandran@nexteraenergy.com)

Principal Officer: Mr. John DiDonato, Vice President  
700 Universe Blvd, FEW/JB  
Juno Beach, FL 33408  
Telephone: (561) 691-7274  
Fax: (561) 304-5404  
Email: [info@highriverenergycenter.com](mailto:info@highriverenergycenter.com)

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

Additional inquiries related to the Project can be directed to [info@highriverenergycenter.com](mailto:info@highriverenergycenter.com) or at (800) 214-7929. The toll-free number established for the Project will be provided in the Application where public contact information is requested, and will also be included on the Public Notice. The Project website can be found at [www.highriverenergycenter.com](http://www.highriverenergycenter.com).

High River Energy Center, LLC, a limited liability company formed on August 25, 2017 in Delaware, will develop, own, operate and maintain a solar powered wholesale generating facility in Montgomery County, New York. High River Energy Center, LLC is a wholly-owned, indirect subsidiary of NEER. NEER is located at 700 Universe Blvd, Juno Beach, Florida 33408. A copy of the certificate or other documents of formation will be provided with the Application.

## 3.02 Overview and Public Involvement (Exhibit 2)

### **Description**

The proposed Project consists of a solar photovoltaic energy generation facility located in the Town of Florida, Montgomery County, New York. The proposed Project Area boundary (see Figure 2) consists of approximately 1,220 acres of land, and the general landscape is a mix of agricultural and forest land. Within the Project Area, it is anticipated that the proposed solar energy center would comprise an area of approximately 550 acres of land.

The proposed Project will consist of a 90 MW solar energy center. Proposed components of the Project include commercial-scale solar arrays, access roads, buried (and possibly overhead) electric collection lines, and electrical interconnection facilities. A description of the solar array, as well as the proposed locations of the solar array will be identified in the Application. Additional Project facilities consist of a new collection substation and POI switchyard, which will interconnect to National Grid's existing Stoner-Rotterdam #12 transmission line. The proposed collection substation and POI switchyard will be located on land within the Project Area adjacent to National Grid's existing Stoner – Rotterdam #12 115 kV transmission line.

### **Application Content Summary**

The Application will comply with all applicable sections of PSL Section 164 and 16 NYCRR § 1001 (Content of an Application). This PSS offers preliminary Project design information, as is reasonably available, with supporting figures and appendices. The Application will provide more detailed, conceptual design information, analyses, and content.

### **Pre-Application Public Involvement**

The Applicant prepared a PIP Plan in accordance with the requirements of 16 NYCRR § 1000.4. The PIP Plan was submitted to the DPS on September 25, 2017. Following the receipt of DPS comments on the PIP Plan, the PIP Plan was updated, finalized, and filed by the Applicant on November 24, 2017. The PIP Plan was created to identify and involve affected stakeholders, introduce the Project to the local community and other interested parties, explain the public outreach and involvement efforts that the Applicant will pursue throughout the development of this Project, and explain how these efforts comport with and satisfy New York's legal and regulatory requirements. High River Energy Center has

completed the pre-PSS consultations set forth in the PIP Plan's Appendix B and has held multiple stakeholder meetings. Meetings are summarized in the PIP Meeting Log (Appendix A). The final PIP Plan is included herein as Appendix C.

High River Energy Center mailed informational flyers to over 1,194 addresses including host and adjacent property owners within the Project Study Area announcing a project open house. The Project open house was held on August 29, 2018. Information was presented describing the proposed Project, Article 10 requirements, proposed studies, availability of intervenor funding, and the review process. Input from attendees was also received and documented. PIP activities are ongoing. Copies of all filed or public outreach documents are also available on the Project website at [www.highriverenergycenter.com](http://www.highriverenergycenter.com). Two additional open house meetings will be held on a date following submission of this PSS.

#### **Post-Application Public Involvement**

After submission of the Application, High River Energy Center will continue to engage stakeholders by conducting outreach to encourage involvement and open communication.

Ongoing PIP Plan activities will continue to be tracked and filed in the Meeting Log which is attached as Appendix A, posted on the Project website, and will be submitted to the Secretary every two months (or as necessary).

#### **PSS Distribution and Notification Efforts**

Notification of filing of the PSS, as required by 6 NYCRR §1000.5 and §1000.6, is available on the Project website and was published in the following newspapers:

- The Leader-Herald, a paid-subscription, daily newspaper for Montgomery County, including the Host Municipality
- The Recorder, a paid-subscription, daily newspaper for Montgomery County.

In addition to the newspaper notices, the stakeholder list has been notified via email or mail (depending on their stated preference) of the PSS Filing. The Applicant has provided an updated stakeholder list with this filing (see Appendix D), which includes host and adjacent landowners and

other parties identified through the Applicant’s outreach efforts, as well as proof that a mailing and newspaper publication has occurred. Copies of the PSS are also available at the following local repositories:

- Town of Florida Town Hall, 214 Fort Hunter Road, Amsterdam, NY 12010;
- Fort Hunter Free Library, 167 Fort Hunter Road, Amsterdam, NY 12010; and
- Amsterdam Free Library, 28 Church Street, Amsterdam, NY 12010.

### **Proposed Studies**

The Applicant proposes to collect, evaluate and provide the following information to support and prepare Exhibit 2 of the Application (not to exceed 15 pages in accordance with §1001.2):

- (a) A brief description of the major components of the proposed Project, including the commercial-scale solar arrays, access roads, electric collection lines, collection substation, and POI switchyard. The Application will provide any Project component dimensions given in meters by the equivalent value in feet.
- (b) A brief summary of the contents of the Application, except those exhibits which do not apply to the proposed Project.
- (c) A brief description of the PIP Plan conducted by the Applicant prior to submission of the Application and an identification of significant issues raised by the public and affected agencies during such program and the response of the Applicant to those issues including a summary of changes made to the proposal as a result of the PIP Plan. Specific components of the PIP conducted to date and the topics addressed will be discussed, including: opportunities for public involvement; development and use of stakeholder list (including host and adjacent landowners); identification of any environmental justice areas; the use of document repositories; consultation with affected agencies and stakeholders, factsheets on the Article 10 process and intervenor funding and other outreach materials; use of meeting logs; and the establishment of a Project website ([www.highriverenergycenter.com](http://www.highriverenergycenter.com)), and local telephone number. Paper copies of major Project documents, except those subject to protective order,

will be sent to the designated local repositories. The Project currently is not planned to have a local office.

- (d) A brief description of the PIP Plan to be conducted by the Applicant after submission of the Application.
- (e) A brief, clearly and concisely written analysis in plain language that presents the relevant and material facts regarding the proposed Project which the Applicant believes the Siting Board should use as the basis for its decision. The analysis shall be analytical and not encyclopedic and shall specifically address each required finding, determination and consideration the Siting Board must make or consider in its decision pursuant to Section 168 of the PSL, and explain why the Applicant believes the requested Certificate should be granted.



### 3.03 Location of Facilities (Exhibit 3)

Figure 1 shows the general region in which the Project is located. Figure 2 shows the boundary of the area in which Project facilities are currently proposed (Project Area) and the corresponding Study Area which encompasses two miles adjacent to the Project Area. The Application will include detailed topographic mapping based on a 2016 (or most recent) version of the United States Geologic Survey (USGS) 1:24,000 edition Amsterdam and Pattersonville topographic quadrangles which will include contours, roads, railways, utility corridors, streams, waterbodies, and other features of interest. The scale of the figures will allow for detailed location information, indication of local roads, and clear identification of Project facility components.

The proposed locations of Project facilities will be identified on topographic base maps (USGS), as well as aerial photos (Environmental Systems Research Institute (ESRI)), in order to provide a clear understanding of the Project layout in relation to existing resources and features. Municipal boundaries (county, city, town, and village) will be obtained from the New York State Geographic Information Systems (GIS) Clearinghouse and ESRI and provided on appropriate mapping. Base map sources, formats, layout sizes and scales for the Application will be identified in the Stipulations. In addition, the Applicant will provide GIS shapefiles of Project locational information to the DPS as part of the Application.

A written Project description, accompanied by representative mapping, will identify and describe the locations of Project components based upon reasonably available information, including:

- Commercial-scale solar arrays
- Inverters
- Access roads
- Collection lines (mostly buried and possibly some overhead)
- Laydown/staging areas
- Collection substation
- POI switchyard

The Project does not include any ancillary features located outside the Project Area.

The Project, including all related facilities, will be sited on privately-owned lands within the Project Area obtained through lease and/or purchase agreements with landowners.

### **Proposed Studies**

The Applicant proposes to collect, evaluate and provide the following information to support and prepare Exhibit 3 of the Application in accordance with §1001.3:

- (a) The most recent USGS maps (1:24,000 topographic edition) reproduced at original scale showing:
  - (1) The proposed location of the major electric generating facility (i.e., Project) and locations of all Project components including commercial scale solar arrays, access roads, collection lines, on site laydown/staging areas, collection substation, and POI switchyard and interconnection. Mapping will include the locations of roads, substations, and similar facilities, as applicable. There is no Operation & Maintenance (O&M) building included as part of the Project.
  - (2) The proposed location of any interconnections, water supply lines, communications lines, stormwater drainage lines, and appurtenances thereto, to be installed in New York State connecting to and servicing the site of the Project that are not subject to the Commission's jurisdiction under PSL Article VII.
  - (3) The location of all proposed ancillary features not located in the Project Area, if applicable, such as roads, railroads, switchyards, fuel or energy storage or regulation facilities, solid waste disposal areas, waste treatment and disposal facilities, and similar facilities, that are not subject to the Board's jurisdiction under PSL Article 10. At this time, no such facilities are proposed.
  - (4) There are no proposed electric transmission line or fuel gas transmission line interconnections that are subject to review under Article VII of the PSL proposed as part

of the Project; therefore, this information is not required to be included as part of the Application.

- (5) The Study Area for the Project generally related to the nature of the technology and the setting of the proposed Project Area. Based on the scale of the Project and the Project setting, the Application will include the evaluation of a two-mile Study Area from all Project Area property boundaries unless stated otherwise in the Application for resource-specific surveys. The proposed Project is not located in areas of significant resource concerns.
- (b) Maps clearly showing the location of the proposed Project Area. Mapping will also show the interconnections, including electric collection lines, collection substation, and the POI switchyard in relation to municipal boundaries, taxing jurisdictions, designated neighborhoods or community districts, at a scale sufficient to determine and demonstrate relation of facilities to those geographic and political features.
- (c) Written descriptions explaining the relation of the location of the proposed Project Area, the interconnections, including electric collection lines, collection substation, and POI switchyard in relation to affected municipalities, taxing jurisdictions, designated neighborhoods or community districts.

### 3.04 Existing Land Use and Project Planning (Exhibit 4)

A map of the existing land uses for the Project Area has been prepared (see Figure 4) using publicly available data from the Montgomery County GIS Department and the classification codes of the New York State Office of Real Property Services (NYSORPS). The following classifications are used by the NYSORPS to identify the different land use types: Agricultural; Residential; Vacant Land; Commercial; Recreation and Entertainment; Community Services; Industrial; Public Services; and Wild, Forested, or Conservation Lands and Public Parks. For the Application, the land use will be further described and mapped based on site-specific investigations and documentation. To further define land uses on land classified by the NYSORPS as Vacant Land within the Project Area, the Applicant will inquire about current uses of vacant land through coordination with participating landowners. A map of the existing vegetated cover showing crop lands, forested lands and other cover types is helpful in providing land use context as well (see Figure 5).

The Project Area is located in Montgomery County Agricultural District 3. Existing agricultural uses within the Project Area consist of a mix of pasture, hay fields and cultivated crops (primarily consisting of corn and soy beans). A review of the Natural Resources Conservation Service (NRCS) Web Soil Survey mapping indicates that of the 22 soil units mapped within the Project Area, five are designated as *Prime Farmland if Drained*, seven are designated as *Farmland of Statewide Importance*, four are designated as *All Areas are Prime Farmland* and the remaining units are designated as *Not Prime Farmland*. Mapping of these NRCS farmland designations will be included in Exhibit 21 Geology, Seismology and Soils of the Application.

The Application will include mapping of the Project Area with the various farmland classifications listed above and of mapped Agricultural Districts (see Figure 6) within the Project Study Area. The Application will also include a discussion describing how the siting, construction, and operation of the Project will avoid or otherwise minimize impacts, to the maximum extent practicable, to Prime Farmland, including a description of the proposed methods for soil stripping, storage and replacement upon the completion of construction, where disturbance to such areas cannot be avoided.

In addition to land use and agricultural maps, mapping of existing transmission facilities (e.g., electric, gas or telecommunications) within the Study Area, based upon publicly available information,

consultations with the Host Municipality, local utilities, and DPS Staff will be provided in the Application.

Maps showing special designation areas such as mapped flood prone zones (see Figure 7), critical environmental areas and recreational/sensitive areas will be prepared using up-to-date databases, such as the New York State GIS Clearinghouse and agency sources, and included in the Application. The Application will also include reference information for each source.

Parcels where Project components will be located, and those properties adjoining them, will be mapped to identify current land use, tax parcel number, and record of ownership. Additionally, any publicly known proposed land use plans for any of these parcels will be mapped using data from the Montgomery County Department of Economic Development and Planning.

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

A review of the impacted municipalities was conducted to identify those with comprehensive plans. Neither the host county (Montgomery County) nor the host municipality (Town of Florida) have an existing comprehensive plan. As further described in Section 3.31, a qualitative assessment of the Project's compatibility with existing, proposed, and allowed land uses will be presented in the Application. This assessment will include evaluation of the compatibility of the Project's above-ground structures, as well as any underground interconnections, with surrounding land uses.

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

### **Proposed Studies**

The Applicant proposes to collect, evaluate and provide the following information to support and prepare Exhibit 4 of the Application in accordance with §1001.4:

- (a) A scaled map showing Project facilities in relation to existing land uses within the Study Area (area within a two-mile radius from the Project Area boundaries) using publicly available data from the Montgomery County GIS Department. The “Montgomery County Parcel Data” data set, derived from the Property Class attribute, will be utilized to produce the scaled map. The Study Area includes approximately 19,141 acres of land (inclusive of the 1,220-acre Project Area).
- (1) Land use classifications codes of the NYSORPS will be used to inventory existing land uses within the Study Area. For the Application, the land use will be further discussed and mapped based on site-specific investigations and documentation. Land use types will be identified as:
  - 100 – Agricultural;
  - 200 – Residential;
  - 300 – Vacant Land (Vacant Land that is identified for Project facility locations and directly adjacent properties will be further broken down by usage [i.e. timber, pasturing, hunting etc.] based on input received from landowners);
  - 400 – Commercial;
  - 500 – Recreation and Entertainment;
  - 600 – Community Services;
  - 700 – Industrial;
  - 800 – Public Services; and
  - 900 – Wild, Forested, or Conservation Lands and Public Parks.
- (b) In addition to land use maps, communications towers and existing overhead or underground lines for electric, gas or telecommunications companies will be mapped within the Study Area.
- (c) A scaled map of all properties upon which any component of the Project or the related facilities would be located, and all properties adjoining such properties that shows the

current land use, tax parcel number and owner of record of each property, and any publicly known proposed land use plans for any of these parcels.

- (d) A scaled map of existing and proposed zoning districts within the Study Area will be created by data obtained from local governments including a description of the permitted and prohibited uses within each zone.
- (e) A statement as to whether the municipality has an adopted comprehensive plan and whether the proposed land use is consistent with such plan. If the municipality's comprehensive plan is posted on a website, the exhibit shall contain the address of the internet site where the plan is posted.
- (f) A map of all publicly known proposed land uses within the Study Area, gleaned from interviews with state and local planning officials, from the public involvement process, or from other sources.
- (g) Maps showing designated agricultural districts flood-prone zones and recreational/sensitive areas. Agricultural districts will be specified, as designated by New York State Department of Agricultural and Markets (NYSDAM) regulations. Flood hazard areas will be specified according to data from the Flood Emergency Management Agency (FEMA) Flood Insurance Rate Maps. There are no designated inland waterways, coastal areas, local waterfront revitalization program areas, State Environmental Quality Review Act (SEQRA) designated critical environmental areas, or groundwater management zones within the Study Area of the Project.
- (h) Scaled maps showing: (i) recreational and other land uses within the Study Area that might be affected by the sight, sound or odor of the construction or operation of the Facility, interconnections and related facilities, including any wild, scenic and recreational river corridors, open space and any known archaeological, geologic, historical or scenic area, park, designated wilderness, forest preserve lands, scenic vistas, conservation easement lands, scenic byways designated by the federal or state governments, nature preserves, designated trails, and public-access fishing areas; (ii) major communication and utility uses and infrastructure; (iii) institutional, community and municipal uses and facilities; and (iv) a

statement, including a summary, describing the nature of the probable environmental impacts and of construction and operation of the Project on such uses, including an identification of how such impacts are avoided or, if unavoidable, minimized or mitigated. Given the provisions of § 304 of the National Historic Preservation Act (NHPA), 9 NYCRR § 427.8, and § 15 of the PSL, information about the location, character, or ownership of a cultural resource shall not be disclosed to the public, and shall only be disclosed to the parties to a proceeding pursuant to an appropriate protective order if a determination is made that disclosure may (1) cause a significant invasion of privacy, (2) risk harm to the affected cultural resource, or (3) impede the use of a traditional religious site by practitioners.

- (i) A qualitative assessment of the compatibility of the Project and any interconnection, with existing, proposed and allowed land uses, and local and regional land use plans, within a one-mile radius of the Facility site and any interconnection route. The qualitative assessment shall include an evaluation of the short- and long-term effects of facility-generated noise, odor, traffic and visual impacts on the use and enjoyment of areas within one mile of Project facilities. The assessment will specifically address impacts to nearby land uses that may be of particular concern to the community, such as residential areas, schools, civic facilities, recreational facilities, and commercial areas.
- (j) A qualitative assessment of the compatibility of proposed above-ground interconnections and related facilities with existing, potential, and proposed land uses within the Study Area.
- (k) A qualitative assessment of the compatibility of underground interconnections and related facilities with existing, potential, and proposed land uses within 300 feet from the centerline of such interconnections or related facilities.
- (l) The Project is not within a designated coastal area or in direct proximity of a designated inland waterway. Therefore, a demonstration of conformance with the Coastal Zone Management Act (CZMA) is not applicable and will not be included in the Application.



- (m) Aerial photographs of all properties within the Study Area of such scale to provide detail, discrimination and identification of natural and cultural features.
- (n) Overlays on aerial photographs which clearly identify the Project Area with all proposed Project facilities, access roads and limits of clearing, in order to show the relationships with existing structures and vegetation cover types.
- (o) All aerial photographs shall reflect the current situation. All aerial photographs shall indicate the photographer and the date photographs were taken.
- (p) A description of community character within the Study Area, an analysis of impacts of Facility construction and operation on community character, and identification of avoidance or mitigation measures that will minimize adverse impacts on community character to the maximum extent practicable. For the purposes of this paragraph, community character includes defining features and interactions of the natural, built and social environment, and how those features are used and appreciated in the community.

### 3.05 Electric Systems Effects (Exhibit 5)

A System Reliability Impact Study (SRIS) is currently in progress for the Project by the New York Independent System Operator (NYISO). The SRIS evaluates a number of power flow base cases, as provided by the NYISO, including expected flows on the system under normal, peak, and emergency conditions to evaluate the effects on stability of the interconnection. Additionally, technical analyses of thermal, voltage, short circuit, and stability are being performed to evaluate the impact of interconnection. The SRIS will be included with the Article 10 Application but will be filed separately with a request for confidentiality as it contains Critical Energy Infrastructure Information and in accordance with NYISO requirements.

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

#### **Applicable Engineering Codes and Standards, Guidelines and Practices**

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

- RUS Bulletin 1724E-200
- ANSI – American National Standards Institute,
- ASCE – American Society of Civil Engineers,
- ASTM – American Society for Testing and Materials,
- Building Code of New York,
- IEEE – Institute of Electrical and Electronic Engineers,
- NEC – National Electric Code,
- NERC – North American Electric Reliability Council,
- NFPA – National Fire Protection Association,
- NPCC – Northeast Power Coordinating Council, Inc.,
- NYSCR – New York State Reliability Council,
- OSHA – Occupational Safety and Health Administrator,
- Underwriters Laboratories.

The Application will describe which codes and standards are applicable to the Project, including interconnection components. The Applicant will also provide a description of the criteria, plans, and protocols for Facility design, construction, commissioning, and operation.

### **Maintenance, Management, and Procedures**

Project commissioning will occur once the solar arrays and Project interconnections are fully constructed and the NYISO is ready to accept transmission of power to the New York grid. The commissioning activities are comprised of testing and inspecting the electrical, mechanical, and communications systems associated with the Project.

Operation and Maintenance of the Facility will follow industry standard practices. The Project will always have an on-call local technician who can respond quickly if required. If an event outside the normal operating range of the Facility occurs, the equipment will immediately and automatically shut down. A report will then be generated and received by the Applicant's Renewables Operations & Control Center (ROCC)/Fleet Performance and Diagnostic Center (FPDC) which is responsible for Project critical controls, responding to alarms, and other functions for the safe and reliable operation of the Project. The responsibilities of the ROCC/FPDC are described further below. The Project's O&M procedures will include facility maintenance and management plans, procedures and criteria addressing vegetation management, and facility inspection and maintenance. The Facility's preliminary O&M procedures will be submitted with the Application.

High River Energy Center O&M procedures will include monitoring of solar components and ancillary structures, environmental monitoring, quality control and assurance, technical training and inspection of access/service road conditions. In addition to routine maintenance activities, additional tasks and/or unscheduled maintenance associated with solar arrays, electrical components, access/service roads, ancillary structures and the Project collection substation will be completed as needed.

O&M personnel will complete routine inspections of the solar arrays, access roads, revegetated areas, collection lines, and the collection substation to document facility conditions, certificate conditions compliance, and identify any potential maintenance or improvement actions that may be needed. As previously mentioned, the POI switchyard will be transferred to National Grid to own, maintain, and operate. During the Applicant's inspections, environmental conditions throughout the Project Area will

also be observed and recorded for evaluation of the effectiveness of restoration activities until site restoration has been completed. The Applicant will also perform periodic environmental audits to ensure compliance with all regulatory and permit conditions, generally every three years. Any findings are immediately resolved by onsite staff and any positive operating procedures are also recorded and disseminated to other operating solar facilities.

In addition to inspections, an O&M schedule will be developed for inspections of all solar arrays. As part of these routine activities, the solar array components will be inspected and the results recorded. All other existing solar structures and ancillary structures will also be inspected along with revegetated areas.

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

In addition to onsite O&M, as described above, High River Energy Center will utilize a twenty-four hour a day, seven day a week ROCC/FPDC that will be responsible for:

- Monitoring the solar facilities;
- Deploying technicians based on projected environmental conditions to optimize the Project; and
- Coordination with a local system operator, as required.

The ROCC/FPDC also provides performance and reliability optimization through remote solar array operation and fault reset capability, the use of advanced real-time equipment performance statistical modeling for advanced diagnostics, benchmarking among similar components and replication of best practices across the fleet. The ROCC/FPDC is supported by technical subject matter experts in the equipment and technology.

It is anticipated that all collection systems will be buried underground. In the event that overhead collection lines are required, vegetation control will be conducted in accordance with best management practices (BMPs), consistent with those adopted in past cases by the Board and/or PSC, to provide safe operation and prevent damage to the line. The Application will provide the vegetation clearance requirements for the collection lines and the Project's Vegetation Management Plan will be submitted with the Application. This plan will describe the vegetation management practices for the array locations, collection lines and the collection substation, including inspection and treatment schedules, and environmental controls to avoid off-site effects.

### **Proposed Studies**

The Applicant proposes to collect, evaluate and provide the following information to support and prepare Exhibit 5 of the Application in accordance with §1001.5:

- (a) An SRIS, performed in accordance with the open access transmission tariff of the NYISO approved by the Federal Energy Regulatory Commission (FERC), that shows expected flows on the system under normal, peak and emergency conditions and effects on stability of the interconnected system, including the necessary technical analyses (Thermal, Voltage, Short Circuit and Stability) to evaluate the impact of the interconnection. The study shall include proposed collection substation and interconnection facilities, as well as any other system upgrades required.
- (b) An evaluation of the potential significant impacts of the Project and its interconnection to transmission system reliability at a level of detail that reflects the magnitude of the impacts.
- (c) A discussion of the benefits and detriments of the Project on ancillary services and the electric transmission system, including impacts associated with reinforcements and new construction necessary as a result of the Facility.
- (d) An analysis of any reasonable alternatives that would mitigate adverse reliability impacts and maintain voltage, stability, thermal limitations, and short circuit capability at adequate levels.

- (e) An estimate of the increase or decrease in the total transfer capacity across each affected interface, and if a forecasted reduction in transfer capability across affected interfaces violates reliability requirements, an evaluation of reasonable corrective measures that could be employed to mitigate or eliminate said reduction.
- (f) A description of criteria, plans, and protocols for generation and ancillary facilities design, construction, commissioning, and operation, including as appropriate to generation technology:
  - (1) Engineering codes, standards, guidelines and practices that apply;
  - (2) Generation facility type certification;
  - (3) Procedures and controls for facility inspection, testing and commissioning;
  - (4) Maintenance and management plans, procedures and criteria, including information on maintaining/mowing grasses under and between the panels and invasive species control measures.
- (g) The Project will not have a thermal component, and therefore, heat balance diagrams are not applicable and will not be included in the Application.
- (h) As part of the Project, the POI switchyard will be transferred to National Grid to own, maintain and operate. Therefore, the Application will include:
  - (1) A statement concerning POI switchyard ownership. At this time, the Applicant anticipates the POI switchyard will be transferred to National Grid to own, maintain, and operate. National Grid, the transmission owner, will control the operational and maintenance responsibilities of the POI switchyard;
  - (2) A statement that the substation-interconnection design will meet the transmission owner's requirements;
  - (3) A statement that the operational and maintenance responsibilities for the POI switchyard will be performed by National Grid.
- (i) Facility maintenance and management plans, procedures and criteria, specifically addressing the following topics:

- (1) Solar photovoltaic panel maintenance, safety inspections, and racking and mounting post integrity;
- (2) The proposed collection substation, line inspections, maintenance, and repairs, including:
  - (i) vegetation clearance requirements;
  - (ii) vegetation management plans and procedures;
  - (iii) inspection and maintenance schedules;
  - (iv) notification and public relations for work in public right-of-way (ROW); and
  - (v) minimization of interference with electric and communications distribution systems.
- (j) Vegetation management practices for the Project facilities, including collection lines and the collection substation, will be included in the Application, including management practices for danger trees (i.e., trees that, due to location and condition, are a particular threat to fall on and damage electrical equipment) around the collection substation, specifications for clearances, inspection and treatment schedules, and environmental controls to avoid off-site effects.
- (k) A list of the criteria and procedures by which proposals for sharing above ground facilities with other utilities will be reviewed, if applicable.
- (l) A status report on equipment availability and expected delivery dates for major components including solar arrays, collection lines, collection substation, transformers, and related major equipment.
- (m) Solar energy generation facilities do not have blackstart capabilities.
- (n) An identification and demonstration of the degree of compliance with all relevant applicable reliability criteria of the Northeast Power Coordinating Council Inc., New York State Reliability Council, and the local interconnecting transmission utility. These appropriate

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



### 3.06 Wind Power Facilities (Exhibit 6)

This requirement is not applicable to the High River Energy Center, as there are no wind power facilities included in the proposed Project.

### 3.07 Natural Gas Power Facilities (Exhibit 7)

This requirement is not applicable to the High River Energy Center, as there are no natural gas power facilities included in the proposed Project.

### 3.08 Electric System Production Modeling (Exhibit 8)

The analyses presented in this Exhibit of the Application will be developed using computer-based modeling tools (GEMAPS, PROMOD or similar). High River will consult with DPS Staff and the New York State Department of Environmental Conservation (NYSDEC) to develop acceptable input data for the simulation analyses. This data includes modeling for the proposed High River Energy Center's output that will be utilized in calculating the projected emissions predicted to be displaced by the Project from other operating power generation facilities.

The Application will expand upon the fact that solar arrays generate electricity without combusting fuel or releasing pollutants into the atmosphere and estimate the levels of sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), and carbon dioxide (CO<sub>2</sub>) emissions in the region with and without the proposed Facility.

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

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

#### **Proposed Studies**

The Applicant proposes to collect, evaluate and provide the following information to support and prepare Exhibit 8 of the Application in accordance with §1001.8:

- (a) The following analyses will be developed using GEMAPS, PROMOD or a similar computer-based modeling tool:

- (1) Estimated statewide and regional levels of SO<sub>2</sub>, NO<sub>x</sub> and CO<sub>2</sub> emissions, both with and without the proposed Project.
  - (2) Estimated minimum, maximum, and average annual spot prices representative of all NYISO Zones within the New York Control Area, both with and without the proposed Project.
  - (3) An estimated capacity factor for the Project.
  - (4) Estimated annual and monthly, on-peak, shoulder and off-peak MW output capability factors for the Project.
  - (5) Estimated average annual and monthly production output for the Project in MWhs.
  - (6) An estimated production curve for the Project over an average year.
  - (7) An estimated production duration curve for the Project over an average year.
  - (8) Estimated effects of the proposed Project on the energy dispatch of existing must-run resources, defined for this purpose as existing wind, hydroelectric and nuclear facilities, as well as co-generation facilities to the extent they are obligated to output their available energy because of their steam hosts.
- (b) The Application will include digital copies of the inputs used in the simulations required in subdivision (a) of this Exhibit. The Applicant will seek the requisite protections for confidential information.

### 3.09 Applicable, Reasonable and Available Alternatives (Exhibit 9)

High River Energy Center has designed the Project to maximize solar output and to efficiently interconnect to the existing power transmission system in Montgomery County, New York. The Project Area's key features, including existing open space, availability of land for lease and/or purchase, and proximity to existing electric transmission infrastructure with capacity available to deliver energy generated from the Project, positions it to best assist New York State in addressing the SEP, CES and other policies directed at meeting climate change goals and advancing the integration of renewable energy. High River Energy Center, in accordance with 16 NYCRR § 1001.9, will include an identification, if any, of applicable, reasonable, and available alternative location sites for the proposed Project. The alternatives analysis will be limited to property under the Applicant's control (i.e., option, lease or ownership) in accordance with 16 NYCRR § 1001.9(a).

The Project has been awarded a contract with NYSEDA to sell RECs generated by a 90 MW solar facility at the proposed site. Therefore, the objective of the Project is to construct a solar energy generating facility that can produce 90 MW of renewable energy at the proposed site.

The location selected for the Project Area 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. High River Energy Center selected the proposed Project Area based on availability of the solar resource, available land from willing landowners, the relative ease of accessing the Project Area (thus limiting unnecessary impacts), the relative ease of connecting to the existing electric transmission grid, and sufficient available capacity on the grid. Additional factors are compatible land use, topography, and avoidance of areas considered of high statewide significance or environmental sensitivity.

In addition, Project layouts are currently being evaluated by the Applicant and will continue to be refined throughout the Article 10 process with input from Project stakeholders, and based upon the results of key resource studies and environmental impacts assessments. A proposed Project layout will be presented in the Application along with a discussion of the reasonable alternative layouts considered.

The Application will include discussions of the following other reasonable, and available alternatives, as applicable:

- General arrangement and design;
- Other solar technology;
- Scale or magnitude; and
- No Build Alternative.

Alternative generating technologies such as wind and natural gas, or other sources such as transmission or demand reducing alternatives, are not reasonable due to the award of the REC contract by NYSEDA to the Applicant for the construction and operation of a 90 MW solar facility at the proposed site.

#### **Proposed Studies**

The Applicant proposes to collect, evaluate and provide the following information to support and prepare Exhibit 9 of the Application in accordance with §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 Project, 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) 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 discussed considering:
  - 1) The environmental setting;
  - 2) The recreational, cultural and other concurrent uses that the site may serve;
  - 3) Engineering feasibility and interconnections;
  - 4) Reliability and electric system effects;

- 5) Environmental impacts, including an assessment of climate change impacts (whether proposed energy use contributes to global temperature increase);
  - 6) Economic considerations;
  - 7) Environmental justice considerations;
  - 8) Security, public safety and emergency planning considerations;
  - 9) Public health considerations;
  - 10) The site's vulnerability to potential seismic disturbances and current and anticipated climate change impacts, such as sea-level rise, precipitation changes, and extreme weather events; and
  - 11) The objectives and capabilities of the Applicant.
- (c) A description and evaluation of reasonable alternatives to the proposed Facility at the primary proposed location including applicable, reasonable, and available alternatives regarding:
- 1) General arrangement and design;
  - 2) Technology;
  - 3) Scale or magnitude;
  - 4) As the Project does not involve wind power facilities, alternative turbine layouts are not applicable to the Project.
  - 5) Timing of the proposed in-service date for the Project in relation to other planned additions, withdrawals, or other capacity, transmission or demand reduction changes to the electric system.
- (d) A statement of the reasons why the proposed Project location is best suited, among other applicable, reasonable, and available alternative locations, if any, and measures to be submitted as part of the Application, to promote public health and welfare, including recreational, cultural and other concurrent uses which the site and affected areas may serve.
- (e) A statement of the advantages and disadvantages of the applicable, reasonable, and available alternatives and the reasons why the primary proposed design technology, scale or magnitude, and timing are best suited, among the applicable, reasonable, and available

alternatives, to promote public health and welfare, including recreational, cultural and other concurrent uses that the site may serve.

- (f) A description and evaluation of the no action/no build alternative at the proposed Project location, including the reason why the proposed Project is better suited to promote public health and welfare, including recreational, cultural and other concurrent uses that the site may serve.
- (g) An identification and description of reasonable alternate energy supplies will be limited to those that are feasible based on the objectives and capabilities of the Applicant (i.e., solar powered electric generation). Accordingly, other fuel sources will not be addressed in the Application.
- (h) Due to the private nature of the Facility, and the objectives and capabilities of the Applicant, (i.e., solar powered electric generation), transmission and demand-reducing alternatives will not be evaluated in the Application.
- (i) A statement of the reasons why the proposed Project is best suited, among the applicable, reasonable and available alternatives to promote public health and welfare, including the recreational, cultural, and other concurrent uses which the site and affected areas may serve.



### 3.10 Consistency with State Energy Planning Objectives (Exhibit 10)

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

REV, as a core initiative of the SEP, is guided by a set of five Guiding Principles, each of which is supported by the High River Energy Center:

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

The SEP builds on the principles above with additional initiatives, goals, and targets. By adding 90 MW of clean, renewable solar power into the New York State energy market, the Project is consistent with the SEP and the Clean Energy Standard (CES) adopted by the PSC pursuant to the SEP and, therefore, instrumental in meeting the New York 2030 Targets of:

- 40% reduction in greenhouse gas emissions from 1990 levels; and

- 50% of electricity generation from renewable energy sources.

As noted above, the CES was adopted pursuant to and is consistent with the goals and objectives of the current SEP. As part of the implementation of the CES, NYSERDA conducts competitive solicitations for renewable projects. This Project was awarded a contract by NYSERDA for the purchase of its RECs in a recent solicitation. Accordingly, the construction and operation of the Project is consistent with the Commission's CES and the SEP.

The Project will also increase fuel diversity within New York State by increasing the amount of electricity produced by solar generation facilities. The New York electric utility system relies on supply from numerous fuel sources, including natural gas, hydroelectric, nuclear, wind, solar, oil, and coal, as well as interconnections with neighboring states and demand-response resources. The Project is consistent with the SEP and other associated State policies, which are designed to encourage the development of renewable energy projects and contribute to the transition of New York's energy markets. Immediate benefits from the Project would include economic development, jobs for the community, greater stability in consumer energy bills and, cleaner air, all consistent with the SEP.

### **Proposed Studies**

The Applicant proposes to collect, evaluate, and provide the following information to support and prepare Exhibit 10 of the Application in accordance with §1001.10:

- (a) A statement demonstrating the degree of consistency of the construction and operation of the Project with the energy policies and long range energy planning objectives and strategies contained in the most recent state energy plan, and any publicly available draft new state energy plan including consideration of the information required by subdivisions (b) through (i) of §1001.10.
- (b) A description of the impact the proposed Project would have on reliability in the state based upon the results of the SRIS; provided, however, this description may be submitted when the SRIS (being prepared as part of the Exhibit 5) is submitted.
- (c) A description of the impact the proposed Project would have on fuel diversity in the State.

- (d) A description of the impact the proposed Project would have on regional requirements for capacity.
- (e) A description of the impact the proposed Project would have on electric transmission constraints.
- (f) The proposed Project will generate electricity without the use of fuel. Therefore, there will be no adverse fuel delivery impacts and this topic will not be addressed in the Application.
- (g) A description of the impact the proposed Project would have in relation to any other energy policy or long range energy planning objective or strategy contained in the most recent state energy plan.
- (h) An analysis of the comparative advantages and disadvantages of applicable, reasonable and available alternative locations or properties identified, if any, of which analysis will be limited to sites under option to the Applicant for the solar energy Project, as authorized by 16 NYCRR § 1001.9(a).
- (i) A statement of the reasons why the proposed Project location and source is best suited, among the applicable, reasonable, and available alternatives identified, if any, to promote public health and welfare, including minimizing the public health and environmental impacts related to climate change.

### 3.11 Preliminary Design Drawings (Exhibit 11)

Drawings developed in support of the Application will be prepared utilizing computer software, such as AutoCAD or MicroStation, under the direction of a professional engineer, landscape architect, or architect who is licensed and registered in the State of New York whose name will be clearly printed on the drawings. These drawings will be labeled “preliminary” and/or “not for construction purposes.” The Project will utilize common engineering scales for plotting full size drawings, as required, and the corresponding common engineering scales for half size sets. High River Energy Center will provide DPS with the appropriate sized copies, in accordance with the Article 10 regulations, as well as AutoCAD or Microstation files of the engineering drawings.

As part of the Application, the Applicant will prepare a site plan, construction operations plan, grading and erosion control plans, a landscaping plan, and a lighting plan as specified in §1001.11. The Application will include typical design details of all underground facilities and all overhead facilities, as applicable. The Project will also obtain coverage under the State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (GP-0-15-002; or SPDES General Permit in effect at the time of construction) and will comply with all requirements therein.

A lighting plan for Project facilities will detail any necessary safety lighting, as well as the type, location and height of proposed exterior lighting fixtures, and an indication of the measures to be taken to prevent unnecessary light trespass beyond the Project Area boundaries. The Application will also include manufacturer cut sheets of proposed light fixtures. The numbers and intensity of lighting will be kept to the minimum level necessary for worker safety and measures such as down-shielding of fixtures to focus the lighting on work areas will be utilized to minimize any unnecessary light impacts beyond the immediate work area and Project Area. Manually activated lighting will also be utilized while maintenance activities are occurring.

The Application will also include a detailed list of engineering codes, standards, guidelines, and practices that High River Energy Center intends to conform to during the planning, designing, construction, and operation of the Project, as applicable. The following is provided as a representative list of applicable codes and standards, which will be updated as needed in support of the Application:

- American National Standards Institute (ANSI)
- Institute of Electrical and Electronics Engineers (IEEE)
- Insulated Cable Engineers Association (ICEA)
- American Society of Mechanical Engineers (ASME)
- National Electric Code (NEC)
- National Electrical Safety Code (NESC)
- National Electric Manufacturers Association (NEMA)
- National Fire Protection Association (NFPA)
- Uniform Building Code (UBC)
- United Laboratories (UL)
- American Iron and Steel Institute
- American Institute of Steel Construction
- AASHTO Standard for Aggregates
- ASCE 7-10 Minimum Design Loads for Buildings and Other Structures
- Federal OSHA 1910.269
- American Concrete Institute (ACI)
- Building Code of New York State

### **Proposed Studies**

The Applicant proposes to collect, evaluate and provide the following information to support and prepare Exhibit 11 of the Application in accordance with §1001.11:

- (a) A site plan showing all structures, driveways, parking areas, emergency access lanes, access ways and other improvements at the Project Area, depicting the proposed site in relation to adjoining properties, and depicting the layout of onsite facilities and ancillary features, as applicable. Additional drawings shall be included depicting the layout of all offsite facilities and ancillary features, if applicable. There are currently no buildings, offsite facilities, or sidewalks proposed.

- (b) A construction operations plan indicating all on-site materials lay-down areas, construction preparation areas, major excavation and soil storage areas, as applicable, and construction equipment and worker parking areas.
- (c) Grading and erosion control plans indicating soil types, depth to bedrock, general areas of cut and fill, retaining walls, initial and proposed contours, and permanent stormwater retention areas, as applicable (will address both construction-phase and permanent installations).
- (d) A landscaping plan indicating areas of trees to be retained, removed, or restored; berms, walls, fences and other landscaping improvements, and areas for snow removal storage.
- (e) A lighting plan detailing the type, number and location of exterior lighting fixtures and indicating measures to be taken to prevent unnecessary light trespass beyond the Project property line.
- (f) Architectural drawings are not required as there are currently no buildings proposed.
- (g) Typical design detail drawings of all underground facilities indicating proposed depth and level of cover, and all overhead facilities indicating height above grade, including descriptions and specifications of all major components.
- (h) For interconnection facilities, the plans and drawings required by subsections (a) through (g) of this exhibit for the proposed interconnection facilities and a profile of the centerline of the interconnection facilities at exaggerated vertical scale.
- (i) A list of engineering codes, standards, guidelines and practices that the Applicant intends to conform with when planning, designing, constructing, operating and maintaining the Project, electric collection system, substation, and POI switchyard, and associated structures, as applicable.

### 3.12 Construction (Exhibit 12)

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

#### **Construction Activities**

Several activities must be completed prior to the proposed commercial operation date. The majority of the activity relates to equipment ordering lead-time, as well as design and construction of the Project facility. Below is a preliminary list of activities necessary to develop the Project. Pre-construction, construction, and post-construction activities for the proposed Project include, but are not limited to:

- Ordering of all necessary components including solar photovoltaic panels, racking, mounting posts, and transformers;
- Complete surveys of properties, locations of all structures and roadways;
- Soil borings, testing, and analysis for proper foundation design and materials;
- Installation of erosion and soil management measures required pursuant to SPDES General Permit;
- Complete construction of access roads, to be used for construction and maintenance;
- Construction of collection lines (mostly underground, and if necessary, above ground);
- Design and construction of the collection substation;
- Installation of solar array mounting posts;
- Solar panel placement and setting;
- Acceptance testing of facility; and
- Commencement of commercial operation.

For construction, access roads are typically built to allow for the delivery of components. The access road will consist of an aggregate surface, and will be adequate to support the size and weight of

maintenance vehicles. The specific solar array placement will determine the amount of access roads that will be constructed for the Project. During the construction phase, several types of light, medium, and heavy-duty construction vehicles will travel to and from the Project Area, as well as private vehicles used by construction personnel. The general area in which access roads will be required, to be located in a manner that mitigates environmental impacts to the maximum extent practicable, will be presented in the Application. Detailed design and engineering information about final access roads will be presented in the Compliance Filing once Certificate Conditions are known and accepted.

### **Construction Management**

While a yet to-be determined Engineering and Procurement Contractor(s) (EPC) will be tasked with constructing the Project, High River Energy Center's construction managers will be on-site overseeing the EPC contractor(s) and will ultimately be responsible for managing and constructing the Project. The EPC contractor(s) will undertake the following activities:

- Purchase of some material and equipment;
- Schedule execution of construction activities; and
- Obtain construction labor.

The contractor(s) also serves as key contact and interface for subcontractor coordination. The EPC contractor(s) will oversee the installation of collection lines as well as the proposed collection substation and POI switchyard. The contractor(s) will also install solar arrays, access roads, and the proposed collection substation and switchyard foundations, as well as coordinate materials receiving, inventory, and distribution. The Project will be constructed under the direct supervision of an NEER on-site construction manager.

The construction team will be on-site to handle materials purchasing, construction, quality control, testing, and start-up. Throughout the construction phase, ongoing coordination will occur between the project development and construction teams. The on-site construction manager will help to coordinate all aspects of the proposed project, including ongoing communication with local officials. The Project construction sequence will include specific details relating to the implementation of the Certificate requirements, including any approved BMPs and the requirements of the SPDES to avoid and/or mitigate impacts, to the maximum extent practicable, to sensitive natural resources, including



wetlands, waterbodies and flood zones. Details and descriptions of proposed BMPs and other avoidance/mitigation measures will be provided in the Application.

Even before the Project becomes fully operational, the O&M personnel will be integrated into the construction phase. The construction manager, the construction environmental compliance manager, and the O&M personnel manager will work together continuously to ensure a smooth transition from construction through solar array commissioning and, finally, operation.

### **Civil Works**

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

- Clearing and grading for solar array installations, if determined necessary;
- Installation of underground (and, if required, overhead) collection lines for connecting the solar arrays to the Project collection substation;
- Installation of any Project Area fencing and security; and
- Restoration and re-vegetation of disturbed land when construction activities are completed.

Additionally, the Application will include preliminary plans and descriptions indicating avoidance of interference with existing utilities, including gas, electric and communications infrastructure.

### **Commissioning**

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

### **Complaint Resolution**

Throughout the construction process and operations, High River Energy Center will remain committed to addressing any comments, concerns or complaints brought forth by the public. If issues are identified by the public, they will be addressed through one formal Complaint Resolution Plan which

will be included as an appendix to the Application. The procedures will provide details on how complaints will be received, when these methods will be communicated to the public, the timeframe in which complaints will be responded to, steps to take when the complaints cannot be resolved by the Applicant, and how complaints will be recorded and tracked. The Applicant will make the Complaint Resolution Plan available to the public. The Applicant will make reasonable efforts to respond to all complaints from residents and businesses quickly and resolve complaints in a timely manner.

### **Proposed Studies**

The Applicant proposes to collect, evaluate and provide the following information to support and prepare Exhibit 12 of the Application in accordance with §1001.12:

- (a) Preliminary quality assurance and control procedures, including staffing positions and qualifications necessary and demonstrating how the Applicant will monitor and assure conformance of facility installation with all applicable design, engineering and installation standards and criteria.
- (b) A statement from a responsible company official that:
  - (1) The Applicant and its contractor(s) will conform to the requirements for protection of underground facilities contained in PSL §119-b, as implemented by 16 NYCRR Part 753.
  - (2) The Applicant will comply with pole numbering and marking requirements, as implemented by 16 NYCRR Part 217 (if determined to be required).
- (c) Preliminary plans and descriptions indicating design, location and construction controls to avoid interference with existing utility transmission and distribution systems, indicating locations and typical separations of proposed facilities from existing electric, gas infrastructure (production or storage wells, pipelines, and related components), and communications infrastructure and measures to minimize interferences where avoidances cannot be reasonably achieved.

- (d) Specification of commitments for addressing public complaints, and procedures for dispute resolution during facility construction and operation.

### 3.13 Real Property (Exhibit 13)

High River Energy Center has entered into option-to-lease agreements for all parcels where Project components will be sited. Appropriate documentation supporting these actions, as available, will be included in the Application and redacted as necessary to protect confidential information. A statement demonstrating that the Applicant has or will obtain any additional rights deemed to be necessary to proceed with the Project will also be provided in the Application.

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

#### **Proposed Studies**

The Applicant proposes to collect, evaluate and provide the following information to support and prepare Exhibit 13 of the Application in accordance with §1001.13:

- (a) A survey of the Project Area showing property boundaries with tax map sheet, block and lot numbers; the owner of record of all parcels included in the Project Area and for all adjacent properties; land rights, easements, grants and related encumbrances on the Project Area parcels; public and private roads on or adjoining or planned for use as access to the Project Area; zoning and related designations applicable to the Project Area and adjoining properties.
- (b) A property/ROW map of all proposed interconnection facilities and off-property/ROW access drives and construction lay-down or preparation areas for such interconnections, as applicable.
- (c) A demonstration that the Applicant has obtained title to or a leasehold interest in the Project Area, including ingress and egress access to a public street, or is under binding contract or option to obtain such title or leasehold interest, or can obtain such title or leasehold interest.

- (d) A statement that the Applicant has obtained, or can obtain, such deeds, easements, leases, licenses, or other real property rights or privileges as are necessary for all interconnections for the Project.
- (e) There are currently no improvement district extensions necessary for the Project. Therefore, this will not be included in the Application.

### 3.14 Cost of Facilities (Exhibit 14)

The Application will provide an estimate of total capital costs associated with the Project for review by the Siting Board subject to applicable Article 10 regulations; however, certain information is considered proprietary and will be provided under separate cover and requested to be treated as trade secret under applicable regulations.

Costs identified will be estimates and will include the costs associated with development and permitting, solar arrays, the balance of Project equipment and engineering, and other costs necessary for interconnecting the Project to the New York bulk transmission system. Sources for these costs will be determined based on relevant industry experience building solar energy projects, and estimated third-party vendor pricing.

#### **Proposed Studies**

The Applicant proposes to collect, evaluate and provide the following information to support and prepare Exhibit 14 of the Application in accordance with §1001.14:

- (a) A detailed estimate, as explained in (b) below, of the total capital costs of the proposed Project, including the costs associated with development and permitting, solar arrays, the balance of Project equipment and engineering, and other costs necessary for interconnecting the Project to the New York grid. However, this information is proprietary. Therefore, the Applicant will seek the requisite trade secret protection for this information pursuant to POL Section 87(2) (d) and 16 NYCRR § 6-1.3.
- (b) The cost estimate provided in subdivision (a) above will be based on the Applicant's experience in building solar energy projects in the United States and estimated prices from third-party vendors associated with the various Project components.
- (c) Upon the demand of any party or of the DPS, the Applicant shall supply the work papers from which the estimates required by subdivision (a) were made, provided that demand is made in the form of a written request. However, this information is proprietary and typically

treated as trade secret. Therefore, the Applicant will seek the requisite trade secret protection for this information pursuant to POL Section 87(2) (d) and 16 NYCRR § 6-1.3.

### 3.15 Public Health and Safety (Exhibit 15)

The Project will not cause public health or safety concerns. Solar energy is considered to be one of the cleanest forms of electricity production. One of the greatest advantages of solar energy production is the maintenance of air quality without water consumption or wastewater discharges. Solar energy generates electricity without emitting pollutants. Solar energy technology allows for production of electricity without creating any gaseous, liquid, or solid wastes, and therefore eliminates the need to treat, collect, transport and dispose of such waste in any significant amount. As described earlier, and as will be discussed in the Application, the Project is consistent with the SEP and the CES.

The Project will not result in negative impacts to air quality. Depending upon the location of existing fossil fuel units, the Project may displace air pollutant emissions from existing generators. Any air emissions are limited to very minor levels during construction activities due to construction equipment and vehicles. The only waste generated by the Project will be minimal amounts of solid waste generated during the construction phase. These materials may include small amounts of plastic, wood, cardboard, and metal packing materials, construction scrap, waste concrete from concrete truck washout, and general refuse, which will be properly recycled or disposed of at a nearby solid waste management facility in accordance with applicable regulations. The handling of wood waste from site clearing activities will also be addressed. In addition, small amounts of waste may be generated during routine maintenance activities (e.g., cardboard, cleaning rags and general refuse). Exhibit 15 of the Application will address how the waste materials will be properly recycled or disposed of at a nearby landfill facility, and will also address the specific local solid waste collection services, landfills, or transfer stations within the Project Area.

In accordance with the requirements of 16 NYCRR §1001.15, the Application will include a summary of the review performed to evaluate potential significant adverse impacts on the environment, public health and safety associated with the Project. Although not anticipated, the Application will present a plan for mitigation and monitoring activities to be employed should any potential impacts be identified.

The Project is not expected to have any negative impacts to public or private water supplies. There will be no water withdrawal involved with operation of the Project. BMPs, such as erosion control



measures (e.g., silt fence, hay bales) will be utilized during construction in order to avoid stormwater runoff to wetlands or waterbodies. The Application will include a proposed Stormwater Pollution Prevention Plan (SWPPP) describing these best management practices (BMPs).

The Application will include maps, contacts and analysis showing the relation of the proposed Project Area to community emergency response resources and facilities including police, fire and emergency medical response facilities and plans and hospitals. Community emergency response services for the Project Area and larger Study Area include:

- Town of Florida Volunteer Fire Department;
- Amsterdam Fire Department;
- Montgomery County Emergency Management Department;
- Montgomery County Sheriff's Office;
- New York State Police; and
- Saint Mary's Healthcare.

The Project is not anticipated to have adverse impacts on any of the topics listed in 16 NYCRR §1001.15(f), as will be documented in the Application. Mapping of the Study Area and analysis based upon publicly available information will be provided in the Application showing the relation of the Project Area to: public water supply resources; designated evacuation routes; existing known hazard risks including flood hazard zones, storm surge zones, areas of coastal erosion hazard, landslide hazard areas, areas of geologic, geomorphic or hydrologic hazard; dams, bridges and related infrastructure; explosive or flammable materials transportation or storage facilities; contaminated sites; and other local risk factors, should any be identified.

### **Proposed Studies**

The Applicant will prepare a statement and evaluation in the Application that identifies, describes, and discusses all potential significant adverse impacts of the construction and operation of the Project and related facilities on the environmental, public health, and safety, at a level of detail that reflects the severity of the impacts and the reasonable likelihood of their occurrence and identifies the current applicable statutory and regulatory framework.

The Applicant proposes to collect, evaluate and provide the following information to support and prepare Exhibit 15 of the Application in accordance with §1001.15:

- (a) The anticipated gaseous, liquid and solid wastes to be produced at the Project during construction and under representative operating conditions of the Project, including their source, anticipated volumes, composition and temperature, and such meteorological, hydrological and other information needed to support such estimates and any studies, identifying the author and date thereof, used in the analysis.
- (b) The anticipated volumes of such wastes to be released to the environment during construction and under an operating condition of the Project.
- (c) The treatment process to eliminate or minimize wastes to be released to the environment.
- (d) The manner of collection, handling, storage, transport and disposal for wastes retained and not released at the site, or to be disposed of.
- (e) Impacts specific to wind powered facilities will not be addressed in the Application as they are not applicable to the Project.
- (f) Maps of the Study Area and analysis showing relation of the proposed Project Area to public water supply resources; community emergency response resources and facilities including police, fire and emergency medical response facilities and plans; emergency communications facilities; hospitals and emergency medical facilities; designated evacuation routes; existing known hazard risks including flood hazard zones, storm surge zones, areas of coastal erosion hazard, landslide hazard areas, areas of geologic, geomorphic or hydrologic hazard; dams, bridges and related infrastructure; explosive or flammable materials transportation or storage facilities; contaminated sites; and other local risk factors, should any be identified.
- (g) All significant impacts on the environment, public health, and safety associated with the information required to be identified pursuant to subdivisions (a) through (f) above, including all reasonably related short-term and long-term effects.

- (h) Any adverse impact on the environment, public health, and safety that cannot be avoided should the proposed Project be constructed and operated and measures for monitoring and measuring such impacts, if applicable.
- (i) Any irreversible and irretrievable commitment of resources that would be involved in the construction and operation of the Project, if applicable.
- (j) Any measures proposed by the Applicant to minimize such impacts, as applicable.
- (k) Any measures proposed by the Applicant to mitigate or offset such impacts, if applicable.
- (l) Any monitoring of such impacts proposed by the Applicant, if applicable.

### 3.16 Pollution Control Facilities (Exhibit 16)

The Project will not generate pollutants on any ongoing basis, nor require any pollution control facilities. Additionally, the Project will not utilize an emergency generator. Therefore, this requirement is not applicable to the High River Energy Center.

### 3.17 Air Emissions (Exhibit 17)

Solar energy centers generate electricity without combusting fuel or releasing pollutants into the atmosphere. Once operational, the Project will produce electricity without emitting greenhouse gases or other air pollutants. The Project will also not require the use of an emergency generator.

#### **Compliance with Applicable Federal, State, and Local Regulatory Requirements**

Solar facilities generate electricity without releasing pollutants into the atmosphere; therefore, the Project is not subject to the Environmental Protection Agency (EPA) New Source Performance Standards (NSPS), which regulate emissions of air pollutants from new stationary sources, and will not require air pollution control permits under the Clean Air Act (CAA) or New York State law or regulation.

Additionally, the Project will generate electricity without releasing SO<sub>2</sub> or NO<sub>x</sub>. As such, the Project is not subject to the requirements under the 1984 State Acid Deposition Control Act, which requires the reduction of sulfur dioxide (SO<sub>2</sub>) emissions from existing sources and nitrogen oxides (NO<sub>x</sub>) emission controls on new sources in New York State. SO<sub>2</sub> and NO<sub>x</sub> in the atmosphere are the primary causes of acid rain.

#### **Emissions by Combustion Sources Table**

The table required by 16 NYCRR § 1001.17(c) summarizing the rate and amount of emissions by combustion sources is not applicable to the Project and will not be included in the Application. This exclusion is due to the fact that solar generation facilities generate electricity without combusting fuel or releasing pollutants into the atmosphere.

#### **Potential Impacts to Ambient Air Quality**

The operation of the Project is anticipated to have a positive impact on air quality by producing electricity with zero emissions. The operation of the Project is expected to offset air emissions from other sources of electrical generation such as fossil fuel powered generation plants. Since solar facilities generate electricity without combusting fuel or releasing pollutants into the atmosphere, the specific requirements of § 1001.17(d) pertaining to pollutant emissions are not applicable to the proposed Project and will not be included in the Application.

Potential temporary impacts to ambient air quality resulting from the construction of the Project, typical of a commercial construction project, will be discussed in the Application. 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 during the approximately nine months of Project construction. These impacts will be mitigated to the maximum extent practicable through the use of BMPs such as:

- Use of ultra-low sulfur diesel fuel in all diesel engines;
- Proper maintenance of all manufacturer supplied air pollution control equipment on all engines;
- Minimization of diesel idling time whenever possible;
- Use of dust and erosion control measures consistent with NYSDEC's New York State Standards and Specifications for Erosion and Sediment Control (SSESC), such as spraying access roads with water as necessary (NYSDEC, 2016).

#### **Offsite Consequence Analysis for Ammonia Stored Onsite**

No ammonia will be stored on-site during Project construction or operation. Therefore, the off-site consequence analysis required by § 1001.17(e) is not applicable to the Project and will not be included in the Application.

#### **Proposed Studies**

Exhibit 17 of the Application will contain a discussion on potential temporary impacts to ambient air quality resulting from the construction of the Project, typical of a commercial construction project. 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. There will be no back-up generator installed for operation of the Project. An identification of appropriate control and mitigation measures to minimize potential adverse impacts will be provided.

### 3.18 Safety and Security (Exhibit 18)

In order to ensure security and safety, an early-development safety plan with a safety tailboard form, construction safety plan, and an operations safety plan will be provided in the Application to help identify the precautions that will be taken in regard to safety relative to the survey, design, layout, construction and operations of the Project. In addition, safety measures are currently employed for all development site-related activities, such as environmental and cultural surveys, land surveys, micro-siting, etc.

The construction contractor will be required to provide a site security plan for Project construction, which will be developed by the contractor selected to lead the construction of the Facility (i.e., Engineering, Procurement, and Construction [EPC] contractor) after a Certificate for the Project has been granted. Preparation of the site security plan will initiate immediately following selection of the EPC contractor, and will be provided to the Siting Board as part of the Compliance Filing. Measures to ensure safety and security during construction may include (but not be limited to) fencing of the construction laydown yard, locking gates to the yard during off-work hours, and posting signs notifying the public of active construction sites. A series of traffic-related signs and road safety measures will also be put in place to help ensure safe driving conditions for the public and Project construction workers. This traffic management plan will be developed for the Project in consultation with local officials and submitted in the Compliance Filing. The Applicant will communicate with stakeholders within the Project Area (and surrounding Study Area) to ensure their awareness of construction activities and the applicable safety and security measures.

Nearly all construction will take place on private property, reducing access to general public traffic. Primary access controls for ensuring public safety during both construction and operation includes design setbacks, security fencing, and locked access to the Project Area, proposed collection substation, and POI switchyard which functions as a way to restrict public access to the facilities.

Exhibit 18 of the Application will also describe the purposes, equipment and planned usage for the various lighting that will be necessary for Project construction and operation. During construction this includes security lighting which will both ensure safe on-site worker activity, and also serve to minimize trespassing. Security lighting will be focused downward in order to minimize any impacts to wildlife or

visual receptors. Manually activated lighting will also be utilized while maintenance activities are occurring. In general, lighting used will be the minimum levels needed to accomplish the purpose and will not be used when unnecessary. Certain electronic security controls and surveillance systems may also be implemented.

With regards to cybersecurity of the Project's digital networks and communication systems, the Applicant will comply with the North American Electric Corporation (NERC) Critical Infrastructure Protection (CIP) standards. The Applicant will utilize a facility that is compliant with the necessary NERC CIP standards. All firewalls and servers are monitored 24 hours a day, seven days a week by a Security Operations Center and all employees are required to complete training in information security awareness.

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

### **Proposed Studies**

The Applicant proposes to collect, evaluate and provide the following information to support and prepare Exhibit 18 of the Application in accordance with §1001.18:

- (a) A preliminary plan for site security of the proposed Project during construction of such facility, including site plans and descriptions of the following site security features (if circumstances dictate their use):
  - (1) Access controls including fences, gates, bollards and other structural limitations;
  - (2) Electronic security and surveillance facilities;



- (3) Security lighting, including specifications for lighting and controls to address work-site safety requirements and to avoid off-site light trespass; and
  - (4) Setback considerations for Project components which may present hazards to public safety.
- (b) A preliminary plan for site security of the proposed Project during operation of such facility, including site plans and descriptions of the following site security features (if circumstances dictate their use):
  - (1) Access controls including fences, gates, bollards and other structural limitations;
  - (2) Electronic security and surveillance facilities;
  - (3) Security lighting, including specifications for lighting and controls to address work-site safety requirements and to avoid off-site light trespass;
  - (4) Lighting of facility components to ensure aircraft safety;
  - (5) Setback considerations for Project components which may present hazards to public safety; and
  - (6) A description of a cyber-security program for the protection of digital computer and communication systems and networks that support the Facility demonstrating compliance with current standards issued by a standards setting body generally recognized in the information technology industry, including, but not limited to, the Federal Department of Commerce's National Institute of Standards and Technology, the NERC, or the International Organization for Standardization (ISO), and providing for periodic validation of compliance with the applicable standard by an independent auditor.
- (c) A preliminary response plan to ensure the safety and security of the local community, including:
  - (1) An identification of contingencies that would constitute a safety or security emergency;
  - (2) Emergency response measures by contingency;
  - (3) Evacuation control measures by contingency; and

- (4) Community notification procedures by contingency.
- (d) A statement that the Applicant will provide a copy of the plans required in subdivisions (a), (b), and (c) of this Exhibit to, and request review of such plans and comment by, the New York State Division of Homeland Security and Emergency Services (DHSES).
- (e) This facility is not located within any part of a city with a population over one million, therefore this section of the Exhibit 18 regulation is not applicable.
- (f) A description of all on-site equipment and systems to be provided to prevent or handle fire emergencies and hazardous substance incidents.
- (g) A description of all contingency plans to be implemented in response to the occurrence of a fire emergency or a hazardous substance incident.
- (h) A statement that the Applicant will provide a copy of the plans required in subdivision (c) of this Exhibit to, and request review of such plans and comment by, local emergency first responders serving the Project Area and a review by the Applicant of any responses received.

### 3.19 Noise and Vibration (Exhibit 19)

A benefit of solar energy centers is that they generate electricity without the use of major sound emitting sources. Sound emitting sources associated with the operation of the Project are limited to the inverters and the transformer(s) associated with the proposed collection substation and POI switchyard. The inverters are used to convert locally generated direct current (DC) current into alternating current (AC) power that is then routed to the collection substation through underground collector cables. Inverters are generally considered a low-level source of noise and will be located among the arrays, away from the boundary of the Project Area. Additionally, they only produce sound while converting DC current into AC power and, therefore, the minimal sound emitted from the inverters will only occur during daylight hours. Additionally, the collection substation and POI switchyard will be sited away from sensitive sound receptors to the maximum extent practicable to avoid potential sound impacts from transformers.

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

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

Two surveys of existing background sound levels will be undertaken to evaluate the possibility of seasonal/vegetation variation, one with leaf-on (i.e., summertime) conditions and one with leaf-off (i.e., wintertime) conditions. Exhibit 19 of the Application will include a report summarizing the noise expert's assessment of the ambient noise environment, using the sound data collected on-site during the leaf-on and leaf-off monitoring periods. Ambient pre-construction noise monitoring locations were

determined based upon proximity of residences to solar arrays, variation in existing noise sources, and site access.

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

### **Construction and Operation Noise**

Project construction will require the operation of heavy equipment for activities such as clearing, grading, access road construction, material and component delivery, installation of electrical interconnect, solar array construction, and site restoration. It is expected that Project-related construction noise will be similar to that of typical road or utility construction projects. Construction noise may be audible on a temporary basis at residences close to solar array locations, trenching operations or access road building activities. These temporary impacts are likely to go unnoticed in many areas because of the remote location of many construction activities due to required setbacks from roads and residences. An analysis will be performed to quantify these construction-related sound levels.

Impacts during operations from low frequency noise or tones are not expected to be significant as part of the Project. As part of the Application, analyses will be carried out to tabulate the A-weighted broadband and low frequency whole octave band (31.5 Hz, 63 Hz and 125 Hz) sound levels at all Project receptors. Sound level impacts from the Project at frequencies below 31.5 Hz may be calculated at the most potentially impacted and representative sensitive receptors if sound level data is available.

As described above, both leaf-on (i.e., summertime) and leaf-off (i.e., wintertime) surveys of existing environmental sound levels will be conducted. The specified statistical parameters for background noise ( $L_{90}$ ,  $L_{50}$  and  $L_{eq}$ ) will be measured in both surveys and compared with model predictions of Project

noise associated with the proposed Project layout, once defined. At least three 1/3 octave band frequency analyzers will be used as sound monitors to record the frequency spectrum of the existing sound levels. At least five total measurement positions, distributed over the Project Area, will be used to evaluate potential geographic variability in sound level within the Project Area.

### **Complaint Resolution**

Throughout the construction process and operations, High River Energy Center will remain committed to addressing any comments, concerns or complaints brought forth by the public. If issues are identified by the public they will be addressed through the Applicant's formal Complaint Resolution Plan which will be included as an appendix in the Application. The procedures will provide details on how complaints will be received, when these methods will be communicated to the public, the timeframe in which complaints will be responded to, steps to take when the complaints cannot be resolved by the Applicant, and how complaints will be recorded and tracked. The Applicant shall make the Complaint Resolution Plan available to the public. The Applicant will make reasonable efforts to respond to all complaints from residents and businesses quickly and resolve complaints in a timely manner.

### **Avoidance and Minimization Measures**

Planned measures to avoid or mitigate, to the maximum extent practical, the noise impacts from the Project include the following:

- Limiting construction activities to certain days (Monday through Saturday) and hours unless otherwise granted the applicable approval; and
- Optimizing the overall layout to maximize, to the extent practicable, distances from potentially sensitive receptors.

### **Proposed Studies**

Exhibit 19 of the Application shall contain a study of the potential noise impacts of the construction and operation of the Project. The study will include the solar arrays, related facilities, and ancillary equipment, including the proposed collection substation and POI switchyard. The name and qualifications to perform such analyses of the preparer of the study shall be stated. If the results of the study are certified in any manner by a member of a relevant professional society, the details of such

certification shall be stated. If any noise assessment methodology standards are applied in the preparation of the study, an identification and description of such standards shall be stated. The Applicant proposes to collect, evaluate and provide the following information to support and prepare Exhibit 19 of the Application in accordance with § 1001.19:

- a) A map of the study area in digital format showing the location of sensitive receptors within 0.25-mile of the Project Area, in relation to the proposed Project, related proposed facilities, ancillary equipment, collection substation and POI switchyard. The sensitive receptors shown shall include residences (including participating, non-participating, full-time, and seasonal), outdoor public facilities and areas, State Forest Lands, places of worship, hospitals, schools, cemeteries, campsites, summer camps, Public Parks, Federal and NY State Lands and other noise-sensitive receptors, if identified. Seasonal receptors will include, at a minimum, cabins and hunting camps, identified by property tax codes and any other seasonal residences with septic systems/running water.
- b) An evaluation of ambient pre-construction baseline noise conditions:
  - 1) Will include A-weighted/dBA sound levels and prominent discrete (pure) tones, at representative potentially impacted noise receptors using actual measurement data recorded in winter and summer and during day and night as a function of time and frequency (A-Weighted data will include 1/3 octave bands from 20 Hertz [Hz] up to 10,000 Hz) using a suitable and suitably calibrated sound level meter (SLM) and octave band frequency spectrum analyzer or similar equipment.
  - 2) The ambient pre-construction baseline sound level will be filtered to exclude seasonal and intermittent noise.
  - 3) The pre-construction ambient sound levels will be evaluated in accordance with the requirements of these exhibits and applicable portions of ANSI Standards S12.100-2014 and S12.9 Part 2-1992 R-2013. These methods and standards will be described in the NIA and summarized in Exhibit 19 of the Application.

- 4) Graphical timelines for the A-weighted Leq and the L90 broadband noise levels for each pre-construction sound measurement location will be included in the Application.
- 5) Figures for the un-weighted Leq and the L90 full-octave band noise levels (after exclusions, starting at the 16 Hz full octave band or 12.5 1/3 octave band) for each pre-construction measurement location will also be included.
- 6) The Application will describe how the pre-construction ambient surveys were conducted including specifications for sound instrumentation and weather meters, calibration, settings, positions that were tested, noise descriptors collected, range of sound frequencies evaluated, weather conditions, testing conditions to be excluded, schedules and time frames, testing methodologies and procedures, provisions for evaluation of existing tones and sounds with strong low frequency noise content, if any.
- 7) Measurement locations will include GPS coordinates of the sound microphones and annual average daily traffic (AADT) information of the nearest road, to the extent the data is available from the County and/or New York State Department of Transportation (NYSDOT). The Application will include a justification for location selection and specify whether selected locations are representative of potentially impacted receptors.
- 8) The seasonal noise will be filtered by using the process specified in ANSI/ASA S12.100-2014. The intermittent noise will be filtered by reporting the L90. Each sound collection will be conducted for a minimum of 7 consecutive days.
- 9) Temporal accuracy of the ambient data will be calculated to a 95 percent confidence interval using the technique in Section 9 of ANSI S12.9-1992/Part 2 (R2013) or any other applicable statistical procedure as appropriate for the Leq and the L90 noise descriptors.
- 10) The sound instrumentation for ambient sound surveys will comply with the following standards: ANSI S1.43-1997 (R March 16, 2007). Specifications for Integrating- Averaging Sound Level Meters; ANSI S1.11-2004 (R June 15, 2009) Specification for Octave-Band Analog

and Digital Filters, and ANSI S1.40-2006 (R October 27, 2011) (Revision of ANSI 1.40-1984) Specifications and Verification Procedures for Sound Calibrators.

- 11) Data collected out of the range of operation of the sound instrumentation will be excluded. Sound data collected at wind speed exceeding 5 meters per second (11 miles per hour) at the sound microphone or portable weather station heights will also be excluded. Pre-construction sound level data collected during periods of rain, thunderstorms and snowstorms will also not be used in the calculation of background sound levels. These exclusions will be indicated on the graphs specified in this section.
- c) An evaluation of future noise levels during construction of the proposed Project, proposed related facilities and proposed ancillary equipment, including predicted A-weighted sound levels at various distances and at proximate potentially impacted and representative sensitive receptors will be performed using the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM), or a 3-D computer propagation model or similar. Information will include predicted sound levels at the nearest sensitive receptor(s) around the collection substation, including the loudest pieces of equipment for the different phases of construction. By its very nature, construction equipment typically moves around the site. For construction sound level impacts, a “table of sound levels vs. distances” will be presented. The construction analysis will include a table indicating the actual distances from expected construction activity to residences around the Project Area. This will provide construction sound levels at residences that will be compared to measured existing sound levels. This section will include a discussion of time frames for construction activities indicating seasons of the year, days of the week, hours of the day, and whether construction activities will be performed during evening time (6:00 p.m. to 10 p.m.), nighttime (after 10:00 p.m. or before 7:00 a.m.), weekends or national holidays.
- d) Future sound levels from the Project will be calculated with the Cadna/A computer software or similar software that uses the ISO 9613-2 standard.
  - 1) For the purposes of this Exhibit the term “ISO-9613-2” will refer to the ISO 9613-2:1996 Standard or equivalently the ANSI/ASA S12.62-2012/ISO 9613-2:1996 (Modified) Standard with no meteorological correction (Cmet) or equivalently with the meteorological correction



Cmet equaled to a value of zero.

- 2) The Cadna/A model performs calculations for full octave bands from 31.5 Hertz (Hz) to 8,000 Hz.
- 3) Computer noise modelling will be performed at a minimum for the Project equipment with the highest Broadband A-weighted sound power level (Maximum dBA sound power level).
- 4) The Application will include a discussion and justification for ground absorption “G” values that will be used for sound propagation over land.
- 5) The predicted sound levels from ISO 9613-2 will be reported for sensitive receptors in tabular format and shown at sensitive receptors and external property boundaries through graphical isolines of A-weighted decibels. Contours will start at 30 dBA and shown in 1-dBA increments. Noise contours representing sound levels in multiples of 5 dB will be differentiated.
- 6) Participating, developed, and, undeveloped (vacant) non-participating properties will be differentiated. Only properties that have a signed contract with the Applicant as of the date of filing the Application will be identified as “participating”.
- 7) A temperature of 10 degrees Celsius and 70 percent relative humidity will be used to calculate atmospheric absorption for the ISO 9613-2 model. These conditions result in the smallest reduction in sound levels caused by air absorption at the key frequencies for A-weighted sound levels.
- 8) The Application will include a brief discussion about the accuracy of selected outdoor propagation models, methodologies, ground absorption values, assumptions and the correlation between measurements and predictions for documented cases as compared to other alternatives, as available.

- 9) The model will also include relevant noise sources from the proposed collection substation and POI switchyard, and proposed ancillary equipment. No emergency generators are proposed for the Project.
  - 10) A ground absorption factor, G, of zero ( $G=0$ ) will be used to represent waterbodies.
- e) An evaluation of future noise levels predicted during operation of the Project, related facilities and ancillary equipment including:
- 1) Modeled A-weighted/dBA sound levels at all sensitive receptors.
  - 2) A discussion of whether a tonal condition is possible from the substation or inverters. The “prominent discrete tone” constant level differences ( $K_t$ ) in ANSI S12.9-2013/Part 3 Annex B, Section B.1, will be used to evaluate tones at the nearest 10 potentially impacted and representative noise receptors using spreadsheet calculations if 1/3 octave band data information are available.
  - 3) Amplitude modulation is not an issue with solar projects and will not be included in the Application.
  - 4) Infrasound and low-frequency sounds:
    - i) Low frequency sounds for the full-octave bands equal to and greater than 31.5 Hz will be evaluated at all the sensitive receptors as listed in Section (a) of this Exhibit. The number of receptors with SPL’s equal to and greater than 65 dB will be reported.
    - ii) Infrasound is not an issue for solar projects and will not be included in the Application.
- f) The A-weighted/dBA sound levels, in tabular form for each sensitive location and in graphical form at external property boundary lines, will be calculated. The tables will include the following:
- 1) The daytime ambient noise level will be calculated from leaf on (i.e., summertime) and leaf

- off (i.e., wintertime) background sound level monitoring data. This will be equal to the L90 of sound levels measured during the daytime at each of the monitoring locations. Daytime will be 15 hours (7 a.m. – 10 p.m.).
- 2) The leaf on (i.e., summertime) nighttime ambient noise level will be calculated from summer background sound level monitoring data. This will be equal to the L90 of sound levels measured at night, during leaf on conditions at each of the monitoring locations. Nighttime will be 9 hours (10 p.m. – 7 a.m.).
  - 3) The leaf off (i.e., wintertime) nighttime ambient noise level will be calculated from background sound level monitoring data. This will be equal to the L90 of sound levels measured at night, during leaf off conditions at each of the monitoring locations. Nighttime will be 9 hours (10 p.m. – 7 a.m.).
  - 4) The worst case future noise level during the daytime period will be determined for each sensitive receptor listed in Section (a) of this Exhibit by logarithmically adding the most representative daytime ambient sound level (L90) as related to the use and soundscape of the location being evaluated, calculated from background sound level monitoring in Section (f)(1), to the modeled upper tenth percentile sound level (L10) of the Project. The L10 statistical noise descriptor corresponds to the highest short-term daytime sound level. Daytime will be 15 hours (7 a.m. – 10 p.m.).
  - 5) The worst case future noise level during the leaf on (i.e., summertime) nighttime period will be determined for each sensitive receptor listed in Section (a) of this Exhibit by logarithmically adding the most representative leaf on nighttime ambient sound level (L90) as related to the use and soundscape of the location being evaluated, calculated from background sound level monitoring in Section (f)(2), to the modeled upper tenth percentile sound level (L10) of the Project at each evaluated receptor. The L10 statistical noise descriptor for the leaf on nighttime period will consist of only the substation operating. Nighttime will be 9 hours (10 p.m. – 7 a.m.).

- 6) The worst case future noise level during the leaf off (i.e., wintertime) nighttime period will be determined for each sensitive receptor listed in Section (a) of this exhibit by logarithmically adding the most representative leaf off nighttime ambient sound level (L90) as related to the use and soundscape of the location being evaluated, calculated from background sound level monitoring in Section (f)(3), to the modeled upper tenth percentile sound level (L10) the Project at each evaluated receptor. The L10 statistical noise descriptor for the leaf off nighttime period will consist of only the substation operating. Nighttime will be 9 hours (10 p.m. – 7 a.m.).
- 7) The daytime ambient average noise level will be calculated by logarithmically averaging sound pressure levels (Leq) (after exclusions) from the background sound level measurements over the daytime period at each monitoring location. These calculations will include both leaf on (i.e., summertime) and leaf off (i.e., wintertime) data. Daytime will be 15 hours (7 a.m. – 10 p.m.).
- 8) Typical facility noise levels for each sensitive receptor listed in Section (a) of this Exhibit will be calculated as the median sound pressure level emitted by the Project at each evaluated receptor. The median sound pressure level will be assumed to be similar to the highest short-term daytime sound level.
- 9) Typical facility daytime noise levels for each sensitive receptor listed in Section (a) of this Exhibit will be calculated as the most representative daytime equivalent average sound level (Leq) that was calculated from background sound level monitoring in Section (f)(7), as related to the use and soundscape of the location being evaluated, logarithmically added to the median facility sound pressure level (L50) at each evaluated receptor. The L50 statistical noise descriptor will correspond to the daytime value calculated in Section (f)(8). Daytime will be 15 hours (7 a.m. – 10 p.m.).
- g) A description of the noise standards applicable to the facility, including any local substantive requirements, and noise design goals for the facility at representative potentially impacted noise receptors, including residences, outdoor public facilities and areas, hospitals, schools, other noise-

sensitive receptors, and at representative external property boundary lines of the facility and related facilities and ancillary equipment sites.

- h) A table outlining regulations, ordinances, noise standards, guidelines and goals applicable to the Project. The Applicant will review applicable local codes and will provide a summary of applicable substantive noise standards from these codes. In addition, the Applicant will include a summary of noise-modeling results from the NIA for all sensitive receptors as listed in Section (a) of this Exhibit in relation to applicable noise ordinances, standards, guidelines, goals and identified criteria by using the specific requirements as related to noise descriptors (e.g., Leq, L10), weighting scales, and time frame of determination (e.g., minutes/hour, 1-hour, 1-year). The number of receptors exceeding any identified limit, threshold, goal, guideline, or recommendation will be included in the Application (in terms of absolute and relative numbers). For ease of identification and comparison the sound study prepared for Exhibit 19 of the Application will use the same definition of “sensitive receptor” and will employ a common receptor labelling system. Noise levels for participant and non-participant lot boundary lines will be represented as specified in Section (d).
- i) Identification and evaluation of reasonable noise abatement measures for construction activities will be provided, including a description of the Complaint Resolution Plan that shall be provided during the construction period. The Application will include an assessment of reasonable noise abatement measures during construction (i.e., implementing BMPs, Complaint Resolution Plan, etc.).
- j) An identification and evaluation of reasonable noise abatement measures for the final design and operation of the Project including the use of alternative technologies, alternative designs, and alternative Project arrangements.
- k) An evaluation of the following potential community noise impacts:
  - 1) The potential for the Project to result in hearing damage will be addressed using OSHA standards, EPA “Levels” document (1974), and the World Health Organization (WHO, 1999).

- 2) Indoor and outdoor speech interference will be addressed using the EPA “Levels” document (1974) and WHO (1999) Guideline Levels.
  - 3) Potential for annoyance and complaints will include a review of peer-reviewed and/or government-sponsored literature, studies, and/or publications, specific to the relationship between solar project noise and annoyance/complaints.
  - 4) Information regarding construction activities will be included in the Construction Operations Plan, the Preliminary Blasting Plan (if any blasting is determined to be necessary), and the Preliminary Geotechnical Report. Potential for some construction activities (such as blasting, pile driving, excavation, horizontal directional drilling [HDD] or rock hammering, if any) to produce any cracks, settlements or structural damage on any existing proximal buildings, including any residences, historical buildings or infrastructure will be analyzed in this section and included in the Application.
  - 5) Potential for air-borne or ground-borne transmitted vibrations from the operation of the Facility to reach a sensitive receptor including any sensitive technological, industrial, or medical activities and cause vibrations on the floors or on building envelope elements that may be perceived at the receptor will be evaluated through a review of peer-reviewed and/or government sponsored literature, studies, and/or publications.
- 
- l) A description of the proposed post-construction evaluation studies and a plan for post-construction evaluations to determine conformance with operational noise design goals.
  - m) An identification of practicable post-construction operational controls and other mitigation measures that will be available to address reasonable complaints, including a description of a complaint resolution plan that shall be provided during periods of construction and operation.
  - n) Specific modeling input parameters, assumptions, and any associated data used in sound propagation modeling and calculations will be included as an appendix to the NIA and shall fairly match the unique operational noise characteristics of the particular equipment proposed for the Project. Application GIS files will include noise source locations, ground elevations, evaluated

participating and non-participating receptor locations; participant and non-participant boundary lines; grading and topography. These will be delivered directly to DPS Staff by electronic means.

## 3.20 Cultural Resources (Exhibit 20)

### **Introduction and Record of Consultation**

Consistent with 16 NYCRR § 1001.20, the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation, and the New York Archaeological Council's (NYAC's) Standards for Cultural Resource Investigations and the Curation of Archaeological Collections in New York State (1994), the Applicant is initiating consultation with the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) to develop a scope and methodology for cultural resources studies for the proposed Project.

To date, a desktop review of cultural resources surveys, reports, recorded site locations, historic areas/buildings, and archaeological sensitivity has been conducted using the OPRHP's Cultural Resources Information System (CRIS). A study of the impacts of construction and operation of the Facility on cultural resources will be conducted and detailed in the Application with Phase IA and Phase IB (if required) archaeological survey reports and historic architectural survey report included in the appropriate appendix.

As no field surveys have been conducted to date, the following summarizes the results of a preliminary desktop search and provides an overall approach to the Phase IA and IB (if required) surveys and the reconnaissance-level historic architectural survey. The Application will contain an analysis of the impacts of construction and operation of the proposed Project on cultural resources identified, as well as the results of both the consultation with the OPRHP, the Phase IA and Phase IB studies, and the reconnaissance-level architectural survey. An Unanticipated Discovery Plan will be provided in the Application that identifies the actions to be taken in the event that resources of cultural, historical, or archaeological importance are encountered during construction activities.

The Project will consist of solar arrays, access roads, buried (and possibly overhead) electric collection lines, a proposed collection substation and POI switchyard. These elements of the Project will require ground disturbance activities during their installation. It is anticipated that archaeological investigations would be required only for areas of significant ground disturbance. Based on a recent solar project in New York State, the OPRHP has determined that certain installation methods of solar arrays and fencing (such as with pile-drivers) do not constitute significant ground disturbance and



would in most cases not require archaeological investigation. Similarly, installation of buried cables via narrow cable plow would not constitute a significant ground disturbance (EDR, 2017:78-79), thereby precluding the need for archaeological survey.

## **Phase IA and Phase IB Archaeological Survey**

### **Phase IA Archaeological Research**

As part of the preliminary Project review, an initial search of OPRHP records was conducted and identified 13 previously-recorded off-site archaeological sites (New York State Museum [NYSM] State Historic Preservation Office [SHPO] sites) within a one-mile radius of the Project Area (Table 1). There are no previously-recorded archaeological sites within the Project Area. According to a preliminary review, three archaeological surveys and six consultation projects have been conducted within a one-mile radius of the Project Area.

Phase IA background research will continue review of site files and archives of the OPRHP, online web-based CRIS, and will examine resources of the New York State Library and NYSM in Albany. This research will obtain information on recorded sites and previous cultural surveys in the surrounding area. Local histories, cartographic data, and other relevant information on the precontact period and historic archaeological sites in the area will also be reviewed. Evaluation of archaeological and historical data from nearby sites will assist in developing a context for the cultural history of the area. A historical assessment of the Project Area will include a review of historical maps, a literature search, and a review of county historical documents located at the New York State and County repositories. Web-based resources of the National Park Service (NPS) and U.S. Department of Agriculture (USDA) will also be consulted. For this research soil maps, aerial photographs, archaeological site maps, state archaeological site files, and National Register (NR) listings will also be examined.

**Table 1. Previously Recorded Off-Site Archaeological Sites within One Mile of Project Area**

Site Number	Site Name	Description	NRHP Status
05701.000106	Durham Project 77	Historic	No Determination of Eligibility (DOE)

Site Number	Site Name	Description	NRHP Status
05701.000010	NYSM 1575	Precontact	No DOE
05701.000011	Truax Site	Precontact	No DOE
05704.000111	Durham Project 110	Historic	No DOE
05701.000107	Durham Project 189	Historic	No DOE
05701.000108	Durham Project 109	Historic	No DOE
05701.000126	Swart Flats Site	Precontact	No DOE
05101.000017	UB 1340 Thomson 5	Precontact	Listed
05701.000015	Luer (Groot) Site	Precontact	No DOE
05701.000013	Aldruitha	Precontact	No DOE
05701.000009	De Graaf Rockhouse	Precontact	No DOE
05701.000117	Durham Project 24	Historic	No DOE
05701.000109	Durham Project 111	Historic	No DOE

Source: OPRHP Site Files, accessed through CRIS, October 2018.

### Archaeological Probability

The results of background research, project mapping, and USGS topographic maps will be examined to determine the archaeological probability of the Project Area. The probability of an area to yield archaeological resources is determined based on environmental factors, potential for disturbed soils, proximity to historic features (roads, bridges, canals, structures, etc.), and the presence or absence of previously recorded archaeological sites. Environmental attributes used to identify precontact period land use patterns include landform type, relative age, distance to a permanent water source, soil type, elevation, slope, and distance to potential resource procurement areas, such as lithic outcrops for stone tool manufacturing.

Based on this review, the Project Area will be divided into areas of High, Moderate, and Low Probability. Areas of High Probability typically include areas in close proximity to previously recorded cultural resources or historic features, floodplains, stream confluences, areas adjacent to water

sources (within 100 meters), headwater zones, prominent knolls, ridge fingers, benches, wetland edges, and rock overhangs. Areas of Moderate Probability typically include relatively level uplands displaced from perennial water sources (greater than 100 meters), and Low Probability areas typically include moderate to steeply sloping surfaces and areas of existing ground disturbance.

### **Phase IA Report**

Following completion of Phase IA research, a Phase IA report following the OPRHP Guidelines will be prepared. The report will contain an environmental overview, precontact period and historic cultural contexts, summaries of previous cultural studies, listings of archaeological and historic sites in the surrounding area, research methods, a discussion of the site probability model and recommendations for Phase IB survey, as needed. The results and research designs of these nearby studies will be reviewed to gain an understanding of acceptable survey methods for projects in similar settings. In support of the text, historical maps and figures will be prepared to illustrate findings, including the development of probability maps. As necessary, the report will provide recommendations for Phase IB survey methods for review and acceptance by the OPRHP.

### **Site Avoidance**

The Applicant will seek to avoid impacts, to the maximum extent practicable, to archaeological sites identified within the Project Area, and as such, development of the proposed Project would present a relatively minimal risk to archaeological resources. A Phase IB archaeological survey will be conducted, as needed, and any archaeological resource identified through Phase IB fieldwork will be summarized, along with potential impacts to such resources and proposed avoidance/mitigation measures, in the Application.

### **Phase IB Archaeological Survey**

Based on the Phase IA research, a field methodology for examining the Project Area of Potential Effects (APE) during a Phase IB survey will be proposed, if determined to be necessary. For archaeological resources, the APE is defined as where ground disturbances may occur, inclusive of access roads, workspaces, collection lines, proposed collection substation, POI switchyard, and other areas of significant ground-disturbing activities. The Phase IB field methods will consist of both pedestrian and shovel test pit (STP) survey to locate all archaeological resources within the Project APE. In areas of High and Moderate Probability, the Applicant will excavate STPs at 15-meter intervals along survey

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

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

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

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

### **Laboratory Analysis and Curation**

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

### **Phase IA/IB Report**

Following completion of Phase IA/IB research, a Phase IA/IB Technical Report will be prepared following *OPRHP Guidelines*. The report will contain a brief environmental overview, prehistoric and historic cultural contexts, summaries of previous cultural studies, listings of archaeological and historic sites in the surrounding area, fieldwork methods and results, and recommendations. In support of the text, historical maps and photographs will be prepared to illustrate findings. Tables including the artifact inventory and shovel tests results will be appended as needed. If archaeological sites are identified, the report will provide recommendations on whether the sites are eligible or ineligible for inclusion in the NRHP, or if additional Phase II studies would be required to determine site eligibility. It is anticipated the report would be filed with the Application. All final documents will be filed with the Compliance Filing.

### **Phase II Study**

Should an archaeological site be identified during the Phase I study that cannot be avoided, a Phase II site investigation will be conducted in consultation with the OPRHP. Should a Phase II study be conducted, it would serve to provide a NRHP eligibility determination of the site and define the site boundaries.

### **Unanticipated Discovery Plan**

The Application will include an Unanticipated Discovery Plan that will identify the actions to be taken in the unexpected event that resources of cultural, historical, or archaeological importance are

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

At present, no archaeological sites are recorded within the Project APE. Based on the background research conducted, portions of the Project Area are considered archaeologically sensitive, and a potential exists for identifying archaeological resources within the Project APE. Therefore, all involved personnel will follow standardized procedures in accordance with State and Federal regulations.

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

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

the site as necessary. The archaeologist would determine, based on the artifacts found and on the cultural sensitivity of the area in general, whether the site is potentially significant and would consult with the OPRHP regarding site eligibility.

### **Discovery of Human Remains**

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

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

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

A plan for the avoidance of any further impact to the human remains and/or mitigative excavation, re-interment, or a combination of these treatments will be developed in consultation with the OPRHP and if applicable, appropriate Native American tribes or closest lineal descendants. All parties will be

expected to respond with advice and guidance in an efficient time frame. Once the plan is agreed to by all parties, the plan will be implemented.

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

### **Historic Architectural Survey**

In compliance with Section 106 of the NHPA and Article 10 regulatory requirements, the Applicant will conduct a reconnaissance-level historic architectural survey for the Project. The goal of the survey is to document architectural resources 50 years or older within the Project APE and evaluate their eligibility for listing on the NRHP. For those properties that are listed or recommended as eligible for listing on the NRHP, the Applicant will further investigate properties for potential visual effects.

### **Agency Consultation and Definition of Area of Potential Effects (APE)**

The Applicant will consult with the OPRHP concerning the definition of the APE for direct and indirect effects, and its proposed survey methodology. The APE for aboveground structures is defined as the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist. For assessment of effects to historic architectural resources, the APE is determined in relation to the nature and scale of new construction, improvements, or demolitions to be made as a result of the continuing O&M of the Project.

For assessment of direct effects, the APE is defined as the area of construction. The Project is expected to have no physical impacts to aboveground resources. The APE for indirect (i.e., visual, atmospheric, or audible) effects includes those areas removed in distance, where Project components will be visible and where there is a potential for a significant visual effect. Per the requirements set forth in 16 NYCRR § 1000.2(ar), the Study Area to be used for analysis of major electric generating facilities is defined as:

*(ar) Study Area: an area generally related to the nature of the technology and the setting of the proposed site. In highly urbanized areas, the study area may be limited to a one-mile radius from*



*the property boundaries of the facility site, interconnections, and alternate location sites. For large facilities or wind power facilities with components spread across a rural landscape, the study area shall generally include the area within a radius of at least five miles from all generating facility components, interconnections and related facilities and alternative location sites. For facilities in areas of significant resource concerns, the size of a study area shall be configured to address specific features or resource issues.*

Considering the Project's relatively low profile compared to wind power facilities, a five mile APE is likely inappropriate. Consistent with the viewshed analysis described in Exhibit 24, Applicant is proposing a two to five mile APE radius to identify specific historic resources. The historic resource APE for indirect effects likely comprises those areas within two to five miles of the proposed Project and which fall within the potential viewshed of the Project (i.e., those areas from which the Project is potentially visible). The two to five-mile-radius Study Area for the Project includes parts of the Towns of Florida and Amsterdam and the City of Amsterdam in Montgomery County, and the Towns of Duanesburg, Princetown, Rotterdam, Glenville, and Charlton in Schenectady County.

### **Background Research**

The Applicant has conducted a desktop analysis for previously surveyed and NRHP-listed/eligible historic properties utilizing the OPRHP's CRIS and NRHP online database. No architectural resources are located within the Project Area (APE for direct effects). Previously recorded historic resources located within five miles of the Project Area include:

- 29 individual resources listed in the NRHP
- 2 historic districts listed in the NRHP
- 53 individual resources that have been determined eligible for listing in the NRHP
- 2 historic districts that have been determined eligible for listing in the NRHP
- 168 previously recorded but unevaluated resources.

### **Architectural Field Survey**

The Applicant will conduct an architectural field survey of the proposed APE. The architectural field survey will revisit all previously recorded resources and document any newly identified architectural resources 50 years old or older that fall within the Project APE. The architectural field survey will

include systematically driving all public roads within the APE to identify resources present. All resources will be assessed from public ROW. Based on previous consultation with OPRHP for a previous large-scale solar energy project (EDR, 2017), buildings that are not sufficiently old (less than 50 years), clearly lack architectural integrity, or are otherwise evaluated by the architectural historian as lacking historical or architectural significance will not be included in or documented during the survey.

All previously identified NRHP-listed and eligible historic properties will be checked and photographed to record existing conditions and reassess their current NRHP status. Each previously identified but unevaluated resource and each newly identified resource will be documented via photography, its location will be recorded on field maps, and field notes taken describing the style, physical characteristics, materials, condition, integrity, and other noteworthy characteristics of each resource. The NRHP evaluation of historic resources will apply the two-part test of historic significance integrity to determine eligibility.

### **Reporting**

Upon completion of the field survey, the surveyed architectural resources will be analyzed in accordance with the NRHP Criteria in 36 CFR § 60.4. A Historic Architectural Survey letter report will be produced for submittal to the OPRHP and as part of the Application. The report will include a project description, statement of methodology, historic context, summary of surveyed resource types, and field results. Survey results will include recommendations of NRHP eligibility/non-eligibility and a preliminary assessment of Project effects, as well as any necessary recommendations for further work. The report will also include maps showing the location of all previously recorded and newly recorded architectural resources in the APE. Surveyed resources will also be entered individually into CRIS with the report and GIS shapefiles for the Project.

### **Proposed Studies**

Consistent with 16 NYCRR § 1001.20, the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation, and the NYAC's Standards for Cultural Resource Investigations and the Curation of Archaeological Collections in New York State (1994), the Applicant initiated consultation with the New York State OPRHP via the CRIS system on May 3, 2018 to develop the scope and methodology for cultural resources studies for the Project. The Applicant proposes to collect,

evaluate and provide the following information to support and prepare Exhibit 20 of the Application in accordance with §1001.20:

- (a) A study of the impacts of the construction and operation of the Project, interconnections and related facilities on archaeological resources, including:
  - (1) A summary of the nature of the probable impact on any archaeological/cultural resources identified addressing how those impacts shall be avoided or minimized;
  - (2) A Phase IA archaeological/cultural resources study for the APE for the Project Area, including a description of the methodology used for such study;
  - (3) A Phase IB study, if required, as determined in consultation with OPRHP;
  - (4) Phase II archaeological studies, in consultation with OPRHP and DPS, if warranted based on Phase I study results;
  - (5) A complete list of all recovered artifacts; and
  - (6) An Unanticipated Discovery Plan that shall identify the actions to be taken in the unexpected event that resources of cultural, historical or archaeological importance are encountered during the excavation process. The Plan shall include a provision for work stoppage upon the discovery of possible archaeological or human remains. In addition, the Plan shall specify the degree to which the methodology used to assess any discoveries follows the most recent Standards for Cultural Resource Investigation and Curation of Archaeological Collections in New York State. Such an assessment, if warranted shall be conducted by a professional archaeologist, qualified according to the standards of the NYAC.
  
- (b) A study of the impacts of the construction and operation of the Project and the interconnections and related facilities on historic resources, including the results of field inspections and consultation with local historic preservation groups to identify sites or structures listed or eligible for listing on the State or NRHP within the viewshed of the Project

and within the Study Area, including an analysis of potential impact on any standing structures which appear to be at least 50 years old and potentially eligible for listing in the State or NRHP, based on an assessment by a person qualified pursuant to federal regulation (36 C.F.R. 61). Mitigation measures, such as local improvement projects, will be discussed should there be any unavoidable impacts to cultural resources. Audible or visual impacts, if any, will also be addressed.

### 3.21 Geology, Seismology, and Soils (Exhibit 21)

The Project will not result in significant impacts to geology, topography and soils. Only temporary, minor impacts to topography are expected as a result of construction activities. For example, where arrays and access road sites are not located on completely level terrain, some minor cut and fill or addition of fill may be required.

A preliminary investigation of the geology, seismology, and soils specific to the Project Area has been conducted via desktop review to provide an overview of the general conditions anticipated for the Project. Additionally, observations about localized geologic topographic conditions are based upon preliminary reconnaissance level field surveys that were conducted in 2017.

Exhibit 21 of the Application will include a study of the geology, seismology, and soils within the Project Area. Each study will consist of the identification and mapping of existing conditions, an impact analysis, and proposed impact avoidance and mitigation measures. Also, an evaluation of the constructability and suitability of equipment foundations will be addressed based upon site-specific conditions. Analysis of the site-specific conditions, engineering characteristics, anticipated impacts and proposed avoidance and mitigation measures will be provided in the Application. At this time, the Applicant anticipates that the solar array racking systems will be supported by posts driven into the ground and will not require foundations. Therefore, the only foundations proposed will be those necessary for the proposed collection substation and POI switchyard.

A map delineating existing slopes (0-3%, 3-8%, 8-15%, 15-25%, 25-35%, 35% and over) within the drainage area potentially impacted by the Project has been prepared using the USGS National Elevation Dataset (see Figure 8). Esri ArcGIS® Software will be used to identify drainage areas and develop detailed slope mapping for the Project Area. The Applicant will include potential receptor areas of stormwater runoff and an identification of sensitive environmental agricultural, and human health and safety receptors for potential hazards associated with construction on slopes greater than 25 percent, if necessary.

The Application will include the proposed, conceptual site plan which will show existing and proposed contours at two-foot intervals, the solar array locations, access roads, laydown and staging areas,

proposed collection substation, and POI switchyard. The Applicant proposes to use two-foot contours constructed from publicly available DEM or site-specific topographic surveys as a basis for the calculation of earth disturbance calculations.

The Application will generally describe the typical scenarios that would result in cut and fill necessary to construct the Project, such as constructing an access road on a side slope, as applicable. High River Energy Center will provide preliminary calculations of the quantities of cut and fill required to support the construction of all structures and access roads as part of the Project using the assembled two-foot contours. Separate approximations for topsoil, sub-soil, and rock will be provided. These summaries will be based upon publicly available datasets and compared to the preliminary site design.

The Application will include the preliminary estimates of fill, gravel, asphalt, and surface treatment materials that are anticipated to be required for solar arrays, access roads, staging areas, and other associated Project facilities. The Application will describe the anticipated amount and characteristics of fill materials expected to be imported to the Project Area, should any be required. No material is expected to be removed from the Project Area. General on-site locations for the storage of cut and fill material during the construction phase of the Project will be identified and provided in the Preliminary Design Drawings.

Construction of the Project will involve typical excavation techniques as would be used for similar work and access road clearing activities. The primary areas of ground disturbance will include the construction of access roads and buried collector cable routes. Commonly used excavation equipment such as backhoes and/or bulldozers are expected to perform much of the work. Collector cable embedment is likely to utilize a cable trencher, plow or blade where possible. A specific description of the processes determining excavation locations will be provided in the Application. Factors used to determine the use of excavation will include but are not limited to, soil corrosivity, depth to bedrock, bedrock competence, and other subsurface constraints. Minimal disturbance will be required for the solar array racking system as they will be supported on posts driven into the ground, therefore not requiring excavation.

The discussion of suitability for construction of buried cables included in the Application will consider the potential for dewatering, soil resistivity, and mechanical protection of the cables. It is anticipated

that the contractor for this Project can excavate buried cable trenches with relatively little difficulty using a rock saw, cable trencher or plow. In the event that bedrock is encountered, it is anticipated to be rippable due to its content, and will thus be excavated using large excavators, rock rippers, or chipping hammers.

As the Project Area includes areas of active agricultural land, the Application will include a discussion of consistency, to the maximum extent practicable, with the New York State Department of Agriculture and Markets guidance document entitled *Guidelines for Agricultural Mitigation for Solar Energy Projects* (most recent version at time of Application filing). A discussion of methods for identifying drainage tile lines prior to construction, along with restoration of any tile lines impacted by Facility construction activities, will be included.

Within the Project Area, there are three main geologic units present. These are the Lorraine, Trenton, and Black River groups. These units were formed in the upper Ordovician and are comprised of predominately shale, mudstone, and sandstone rock types. Most of the rock types are made up of soft fragments and do not pose any obstacle to excavation.

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

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

associated with the operation such as safe transportation, coordination with local safety officials, assessment of potential adverse impacts, and the evaluation of reasonable mitigation measures resulting from blasting impacts.

A desktop review of the USDA NRCS Web Soil Survey was used to collect soil data within the Project Area (see Figure 9). The USDA NRCS Web Soil Survey indicates that several of the soils found in the Project Area are soils of statewide importance for farmland. The USDA NRCS soil data is categorized by mapping unit, land area coverage of the Project Area (acreage), percent land coverage of the Project Area (percentage), slope, drainage class, hydrologic soil group (HSG), and farmland classification. The soils included below represent the soils which are the most commonly found within the Project Area. These soils are described in more detail below in order to provide a general understanding of the soils within the Project Area. The Soil Survey of Montgomery County, New York indicates that the Project Area predominantly consists of silty loams, ranging from somewhat poorly drained to well-drained soils. In addition, the soils established onsite were classified by their farmland importance: “*Farmland of Statewide Importance*”, “*Prime Farmland if Drained*”, or “*Not Prime Farmland*.”

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

### **Soil Descriptions**

#### ***Appleton silt loam, 3 to 8 percent slopes (ApB) –***

Consists of somewhat poorly drained soils that occur on footslopes and base slopes of drumlins, ridges, and till plains. These soils are developed in calcareous loamy lodgment till derived from limestone, sandstone, and shale. Its typical profile is 0-79 inches thick.

#### ***Burdett channery silt loam, 3 to 8 percent slopes (BuB) –***

Consists of somewhat poorly drained soils that occur on footslopes, summits and base slopes of hills, drumlinoid ridges, and till plains. These soils are developed in a thin silt mantle overlying till that is strongly influenced by shale. Its typical profile is 0-60 inches thick.



*Cut and fill land (CFL) –*

Consists of somewhat excessively drained soils with a parent material of gravelly and very gravelly loam. Its typical profile is 0-70 inches thick.

*Churchville silty clay loam, 0 to 3 percent slopes (ChA) –*

Consists of somewhat poorly drained soils that occur on footslopes, base slopes, and treads of lake plains, and till plains. These soils are developed in clayey glaciolacustrine deposits over loamy till. Its typical profile is 0-84 inches thick.

*Darien silt loam, 0 to 3 percent slopes (DaA) –*

Consists of somewhat poorly drained soils that occur on footslopes and summits of drumlinoid ridges, hills, and till plains. These soils are developed in loamy till derived predominantly from calcareous gray shale. Its typical profile is 0-60 inches thick.

*Darien silt loam, 3 to 8 percent slopes (DaB) –*

Consists of somewhat poorly drained soils that occur on footslopes and summits of hills, till plains, and drumlinoid ridges. These soils are developed in loamy till derived predominantly from calcareous gray shale. Its typical profile is 0-60 inches thick.

*Darien silt loam, 8 to 15 percent slopes (DaC) –*

Consists of somewhat poorly drained soils that occur on footslopes and base slopes of hills, till plains, and drumlinoid ridges. These soils are developed in loamy till derived predominantly from calcareous gray shale. Its typical profile is 0-60 inches thick.

*Farmington-Rock outcrop association, moderately steep (FBD) –*

Consists of somewhat excessively drained soils that occur on shoulders and crests of ridges, till plains, and benches. These soils are developed in loamy till or congeliturbate derived from limestone, dolomite, shale, and sandstone, and in many places mixed with wind and water deposits. Its typical profile is 0-20 inches thick.

*Fluvaquents, loamy (FL) –*

Consists of poorly drained soils that occur on toeslopes and dips of floodplains. These soils are developed in alluvium with highly variable texture. Its typical profile is 0-70 inches thick.

*Illion silt loam, 0 to 3 percent slopes (IIA) –*

Consists of poorly drained soils that occur on toeslopes and footslopes of depressions. These soils are developed in loamy till derived from calcareous dark shale. Its typical profile is 0-60 inches thick.

*Illion silt loam, 3 to 8 percent slopes (IIB) –*

Consists of poorly drained soils that occur on toeslopes and base slopes of depressions. These soils are developed in loamy till derived from calcareous dark shale. Its typical profile is 0-60 inches thick.

*Lansing silt loam, 3 to 8 percent slopes (LaB) –*

Consists of well drained soils that occur on summits, shoulders, and backslopes of drumlins, hills, and till plains. These soils are developed in calcareous loamy lodgment till derived from limestone, sandstone, and shale. Its typical profile is 0-79 inches thick.

*Lansing silt loam, 8 to 15 percent slopes (LaC) –*

Consists of well drained soils that occur on summits, shoulders, and backslopes of till plains, drumlins, and hills. These soils are developed in calcareous loamy lodgment till derived from limestone, sandstone, and shale. Its typical profile is 0-79 inches thick.

*Lansing silt loam, 15 to 25 percent slopes (LaD) –*

Consists of well drained soils that occur on backslopes and side slopes of drumlins, hills, and till plains. These soils are developed in calcareous loamy lodgment till derived from limestone, sandstone, and shale. Its typical profile is 0-79 inches thick.

*Lansing and Mohawk soils, 25 to 60 percent slopes (LMF) –*

Consists of well drained soils that occur on backslopes and side slopes of drumlins, hills, and till plains. These soils are developed in calcareous loamy lodgment till derived from limestone, sandstone, and shale. Its typical profile is 0-79 inches thick.

*Madalin silty clay loam, 0 to 3 percent slopes (Ma) –*

Consists of poorly drained soils that occur on toeslopes and treads of depressions. These soils are developed in brown, clayey, glaciolacustrine deposits derived from calcareous shale. Its typical profile is 0-79 inches thick.

*Nunda channery silt loam, 3 to percent slopes (NuB)*

Consists of somewhat excessively drained soils that occur on drumlinoid ridges, hills, and till plains. These soils are developed in loamy till derived from calcareous shale and siltstone. Its typical profile is 0-60 inches thick.

*Nunda channery silt loam, 8 to 15 percent slopes (NuC) –*

Consists of somewhat excessively drained soils that occur on drumlinoid ridges, hills, and till plains. These soils are developed in loamy till derived from calcareous shale and siltstone. Its typical profile is 0-60 inches thick.

*Palatine silt loam, 3 to 8 percent slopes (PaB) –*

Consists of well drained soils that occur on summits and crests of benches, ridges, and till plains. These soils are developed in channery loamy till dominated by calcareous dark shale. Its typical profile is 0-32 inches thick.

*Palatine silt loam, 8 to 15 percent slopes (PaC) –*

Consists of well drained soils that occur on shoulders and crests of ridges, till plains, and benches. These soils are developed in channery loamy till dominated by calcareous dark shale. Its typical profile is 0-32 inches thick.

*Palatine silt loam, 15 to 25 percent slopes (PaD) –*

Consists of well drained soils that occur on backslopes and side slopes of benches, ridges, and till plains. These soils are developed in channery loamy till dominated by calcareous dark shale. Its typical profile is 0-32 inches thick.

*Wassaic silt loam, 3 to 8 percent slopes (WaB) –*

Consists of moderately well drained soils that occur on summits and crests of ridges, till plains, and benches. These soils are developed in loamy till derived mainly from limestone, with varying amounts of sandstone, shale, and crystalline rock. Its typical profile is 0-31 inches thick.

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

The overall suitability of the soil conditions for construction will be analyzed based on the results of the preliminary geotechnical investigation. This investigation will include test borings at a subset of proposed solar array and substation locations and reviews of publicly available surface and subsurface soils, bedrock, and groundwater data.

The results of the preliminary geotechnical investigation will be presented in Exhibit 21 of the Application and will provide a description of regional geology, tectonic settings, seismology, and include any known areas of karst geology within or adjacent to the Project Area. It will also analyze and address any perceived impacts to the regional geology as a result of construction and operation

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

In addition to the preliminary geotechnical results, Exhibit 21 of the Application will include a preliminary engineering assessment on the foundation designs expected to be needed for the proposed collection substation and POI switchyard equipment. A foundation evaluation will be undertaken to address the on-site geologic conditions for determination of the preferred specifications of proposed foundations.

The seismology of Montgomery County was analyzed based on the New York 2014 Seismic Hazard Map (see Figure 10). Based on the mapping, Montgomery County is located in an area with a 2% probability over 50 years of peak acceleration exceeding 10% to 14% of the force of gravity. This indicates relative low probability for seismic activity and bedrock shift in the vicinity of the Project Area.

### **Proposed Studies**

The Applicant proposes to collect, evaluate and provide the following information to support and prepare Exhibit 21 of the Application in accordance with §1001.21. Exhibit 21 shall contain a study of the geology, seismology, and soils impacts of the Project consisting of the identification and mapping of existing conditions, an impact analysis, and proposed impact avoidance and mitigation measures, including:

- (a) A map delineating existing slopes (0-3%, 3-8%, 8-15%, 15-25%, 25-35%, 35% and over) on and within the drainage area potentially influenced by the Project Area and interconnections using the USGS National Elevation Dataset and Esri ArcGIS® software.

- (b) A proposed site plan showing existing and proposed contours at two-foot intervals, for the Project Area and interconnections, at a scale sufficient to show all proposed structures, paved and vegetative areas, and construction areas. No buildings are proposed.
- (c) Preliminary cut and fill calculations based on publicly available contour data. Separate calculations for topsoil, sub-soil and rock will be roughly approximated based on publicly available data from the Montgomery County Soil Survey. Exhibit 22 will describe a plan to identify the potential presence of invasive species in spoil material and to prevent the introduction and/or spread of invasive species by the transport of fill material to or from the site of the facility or interconnections.
- (d) A description and preliminary calculation of the amount of fill, gravel, asphalt, and surface treatment material to be brought in to the Project Area. The Application will describe the anticipated amount and characteristics of all fill materials expected to be imported into the Project Area. For comparative context, the anticipated amount of fill materials imported will be presented in both cubic yards, and the equivalent number of truck loads.
- (e) No fill, gravel, asphalt, or surface treatment materials will be removed from the Project Area. The Application will confirm that existing soils are suitable for reuse as backfill with reference to the results of the Preliminary Geotechnical Investigations and existing soils mapping and data, and will indicate why it is not necessary to remove material from the Project Area.
- (f) A description of construction methodologies and activities associated with the Project, including anticipated excavation techniques, based on site-specific Preliminary Geotechnical Investigations, and a preliminary identification of where each type of excavation will be employed. If HDD or other trenchless methods are anticipated, an inadvertent return plan will be included in the Application.
- (g) A delineation of temporary cut or fill storage areas to be employed.
- (h) A description of the characteristics and suitability for construction purposes of the material excavated for the Project and of the deposits found at foundation level, including factors such as soil corrosivity, bedrock competence, and subsurface hydrologic characteristics.

- (i) Blasting is not anticipated as part of the Project and the Applicant intends to provide a general statement in the Application indicating such. If blasting is determined to be required, a preliminary blasting plan, an assessment of potential blasting impacts, and a blasting impact mitigation measures plan will be provided.
- (j) An assessment of potential impacts of blasting to environmental features, aboveground structures and below-ground structures such as pipelines, wells, and drain tiles, if applicable.
- (k) An identification and evaluation of reasonable mitigation measures regarding blasting impacts, including the use of alternative technologies and/or location of structures, and including a plan for securing compensation for damages that may occur due to blasting, if applicable.
- (l) A description of the regional geology, tectonic setting and seismology of the Project Area.
- (m) An analysis of the expected impacts of construction and operation of the Project with respect to regional geology, if such can be determined.
- (n) An analysis of the impacts of typical seismic activity experienced in the Project Area based on current seismic hazards maps, on the location and operation of the Project identifying potential receptors in the event of failure, and if the Project is proposed to be located near a young fault or a fault that has had displacement in Holocene time, demonstration of a suitable setback from such fault;
- (o) A map delineating soil types within the Project Area and the various USDA NRCS farmland classifications as identified on the most current publicly available mapping.
- (p) A description of the characteristics and suitability for construction purposes of each soil type identified above, including a description of the soil structure, texture, percentage of organic matter, and recharge/infiltration capacity of each soil type and a discussion of any de-watering that may be necessary during construction and whether the Project shall contain any facilities below grade that would require continuous de-watering.

- (q) Maps, figures, and analyses delineating depth to bedrock and underlying bedrock types, including vertical profiles showing soils, bedrock, water table, seasonal high groundwater, and typical foundation depths on the Project Area, and any area to be disturbed for roadways to be constructed and all off-site interconnections required to serve the Project, including an evaluation for potential impacts due to Project construction and operation, including any on-site wastewater disposal system, based on information to be obtained from available published maps and scientific literature, review of technical studies conducted on and in the vicinity of the Facility, and on-site field observations, test pits and/or borings as available.
- (r) An evaluation to determine suitable proposed collection substation and POI switchyard foundations, including:
  - (1) A preliminary engineering assessment to determine the types and locations of foundations to be employed. The assessment shall investigate the suitability of such foundation types as spread footings, caissons, or piles, including a statement that all such techniques conform to applicable building codes or industry standards.
  - (2) If piles are to be used, a description and preliminary calculation of the number and length of piles to be driven, the daily and overall total number of hours of pile driving work to be undertaken to construct the Project, and an assessment of pile driving impacts surrounding properties and structures due to vibration.
  - (3) Identification of mitigation measures regarding pile driving impacts, if applicable, including a plan for securing compensation for damages that may occur due to pile driving.
- (s) An evaluation of the vulnerability of the Project Area and the operation of the Project to an earthquake event. Because of the Project's distance from any large body of water, the Application will not address tsunami vulnerability.



- (t) A discussion of consistency, to the maximum extent practicable, with the New York State Department of Agriculture and Markets guidance document entitled *Guidelines for Agricultural Mitigation for Solar Energy Projects* (most recent version at time of Application filing).
- (u) A discussion of methods for identifying drainage tile lines prior to construction, along with restoration of any tile lines impacted by Facility construction activities, will be included.

### 3.22 Terrestrial Ecology and Wetlands (Exhibit 22)

Exhibit 22 of the Application will summarize the ecological communities within the Project Area as identified through a desktop resource review and on-site field surveys. Plant, wildlife, and sensitive terrestrial communities will be identified through desktop research and review, and reconnaissance-level field observations, including on-site wetland delineations. Preliminary on-site ecological surveys were conducted during the 2017 and 2018 growing seasons, and follow-up surveys may occur, if required, prior to the submittal of the Application. Based on a preliminary desktop review, the main terrestrial and wetland ecological communities currently mapped within the Project Area are summarized in the sections below.

#### **Regional**

The Project Area is within the Eastern Great Lakes Lowlands ecological region (ecoregion), as defined by Bryce et al. (2010). This ecoregion, which is assigned the map unit “83,” includes valleys and lowlands underlain by interbedded limestone, shale, and sandstone rocks that are more erodible than the more resistant rocks composing the adjacent mountainous areas. The topography and soils of the lowlands have also been shaped by glacial lakes and episodic glacial flooding. Limestone-derived soils are fine-textured, deep, and productive. As a result, much of the region was cleared for agriculture or urban development and fewer native forests remain than in surrounding ecoregions (Bryce et al., 2010).

More specifically, the Project Area is within the NYSDEC’s Mohawk Valley ecoregion (map unit 83f). This ecoregion separates the Glaciated Low Allegheny Plateau (60a) to the south from the Adirondack Mountains (map units 58aa, 58ab, and 58ac) to the north. The Mohawk Valley is underlain by limestone and shale that dips to the south away from the Adirondack Mountains. Mohawk Valley soils are loamy, moist Alfisols derived from glacial till that support dairy farming, pasture, and associated forage crops. The Mohawk Valley is irregular and hilly, and the flat Mohawk River floodplain is quite narrow in places (Bryce et al. 2010).

Per the classification system developed by the USDA, the Project Area is within Major Land Resource Area (MLRA) 101 (Ontario-Erie Plain and Finger Lakes Region) of Land Resource Region L (Lake States Fruit, Truck Crop, and Dairy region) (USDA-NRCS 2006). This MLRA supports forest vegetation,

particularly hardwoods. Typical forest types within this MLRA are elm-ash-red maple or beech-birch-sugar maple, in varying proportions. Other tree species associated with these forest types include basswood, hemlock, white pine, black cherry, and some species of upland oak (USDA NRCS, 2006).

### **Local**

Land cover in the Project Area was determined spatially using aerial orthoimagery interpretation and preliminary on-site ecological surveys. Based on these reviews, the vegetative cover type within the Project Area consists primarily of active agricultural land (75%) and forestland (17%), along with lesser amounts of successional shrubland (4%), disturbed-developed (3%), successional old-field (0.8%), and open water (0.2%). The Project Area's plant communities will be further described in the Application based on data collected during supplemental ecological resource surveys. Additionally, the Application will include a discussion of potential impacts on agricultural resources, including calculations and an assessment of the areal extent of temporary and permanent impacts, per 16 NYCRR § 1001.22(q). An evaluation of proposed agricultural restoration techniques due to temporary disturbance during construction in on-site laydown areas will be presented in the Application.

### **Wetland Mapping and Designated Functions and Values**

Wetland biologists will assess each wetland identified within the Project Area with respect to functions and values, and include the assessment in the Application. Functions are self-sustaining properties of a wetland ecosystem that exist in the absence of society. Functions result from both living and non-living components of a specific wetland. These include all processes necessary for the self-maintenance of the wetland ecosystem such as primary production and nutrient cycling. Therefore, functions relate to the ecological significance of wetland properties without regard to subjective human values (USACE, 1999).

Values are benefits that derive from either one or more functions and the physical characteristics associated with a wetland. Most wetlands have corresponding societal value. The value of a particular wetland function, or combination thereof, is based on human judgment of the worth, merit, quality, or importance attributed to those functions (USACE, 1999). The assessment of wetland values will also be included in the Application.

The eight wetland functions typically assessed are:

- Groundwater Recharge/Discharge;
- Floodflow Alteration;
- Fish and Shellfish Habitat;
- Sediment/Toxicant/Pathogen Retention;
- Nutrient Removal/Retention/Transformation;
- Production Export (nutrient);
- Sediment/Shoreline Stabilization; and
- Wildlife Habitat.

The five wetland values typically assessed are:

- Recreation (consumptive and non-consumptive);
- Educational/Scientific Value;
- Uniqueness/Heritage;
- Visual Quality/Aesthetics; and
- Threatened or Endangered Species Habitat.

Per the United States Army Corps of Engineers (USACE), these are not necessarily the only wetland functions and values possible, nor are they so precisely defined as to be unalterable. Best professional judgment is used by wetland scientists to determine the functions and values that are assessed for each project, and the results of the assessment will be included in the Application.

#### **Avoidance/Mitigation Measures**

The Project is being designed to avoid and/or minimize impacts to wetland and waterbody resources to the maximum extent practicable, and the Applicant will implement the following BMPs to further reduce the risk for impacts to water resources:

- Siting solar arrays, access roads, collection substation and POI switchyard to avoid wetlands to the maximum extent practicable;
- Adherence to a practice of avoiding trenching or use of heavy equipment in waterbodies;

- Restoration of temporarily impacted wetlands and waterbodies to pre-construction conditions;
- Implementation of a SWPPP to minimize impacts to wetlands during construction; and
- Implementation of a spill prevention and response plan and utilizing a buffer system around wetlands.

The Application will discuss measures to be implemented during construction to avoid and/or mitigate impacts to the maximum extent practicable to wetland and waterbody resources.

## Wildlife

### Amphibians and Reptiles

Amphibian and reptile distribution information for the Project Area was accessed through the NYSDEC’s “Amphibian and Reptile Atlas Project” (Herp Atlas Project) website. The Herp Atlas Project was a 10-year survey from 1990 to 1999 designed to document the distribution of the approximately 70 species of amphibians and reptiles found in New York State.<sup>1</sup> The standard “unit of measurement” used to map the distribution of amphibians and reptiles is the USGS 7.5 minute series quadrangle. The Project Area is located on the Amsterdam, NY and Pattersonville, NY 7.5 minute series quadrangles, and based on the Herp Atlas Project distribution maps, the reptiles and amphibians documented on these quadrangles include:

**Table 2. Reptiles and Amphibians within Project Area**

Scientific Name	Common Name	7.5 Minute Quadrangle
<b>Amphibians</b>		
<i>Necturus maculosus</i>	Common mudpuppy	Pattersonville
<i>Ambystoma maculatum</i>	Spotted salamander	Amsterdam & Pattersonville
<i>Desmognathus ochrophaeus</i>	Allegheny dusky salamander	Pattersonville
<i>Plethodon c. cinereus</i>	Northern red-back salamander	Amsterdam & Pattersonville
<i>Eurycea bislineata</i>	Northern two-lined salamander	Pattersonville
<i>Bufo a. americanus</i>	American toad	Amsterdam & Pattersonville
<i>Hyla versicolor</i>	Gray treefrog	Amsterdam
<i>Pseudacris crucifer</i>	Northern Spring Peeper	Amsterdam & Pattersonville
<i>Lithobates (Rana) catesbeiana</i>	American bullfrog	Pattersonville
<i>Lithobates (Rana) clamitans</i>	Green frog	Amsterdam & Pattersonville
<i>Lithobates (Rana) sylvatica</i>	Wood frog	Amsterdam & Pattersonville

<sup>1</sup>The Herp Atlas Project is commencing a new 10-year survey in 2018.

Scientific Name	Common Name	7.5 Minute Quadrangle
<i>Lithobates (Rana) pipiens</i>	Northern leopard frog	Amsterdam & Pattersonville
<i>Lithobates (Rana) palustris</i>	Pickerel frog	Amsterdam & Pattersonville
<b>Reptiles</b>		
<i>Chelydra s. serpentina</i>	Common snapping turtle	Pattersonville
<i>Glyptemys insculpta</i>	Wood turtle	Pattersonville
<i>Trachemys scripta elegans</i>	Red-eared slider	Amsterdam
<i>Chrysemys picta</i>	Painted turtle	Pattersonville
<i>Nerodia s. sipedon</i>	Northern water snake	Pattersonville
<i>Thamnophis sirtalis</i>	Common garter snake	Amsterdam & Pattersonville
<i>Heterodon platirhinos</i>	Eastern hognose snake	Pattersonville

The Application will discuss all potential direct and indirect impacts to reptiles and amphibians, including any potential mitigation and avoidance measures to be undertaken to avoid significant impacts.

#### Mammals

The Project Area plant habitats are typical of those that support mammals such as whitetail deer, black bear, coyote, red fox, gray fox, striped skunk, raccoon, Virginia opossum, eastern cottontail, woodchuck, eastern chipmunk, gray squirrel, red squirrel, and several species of bat, mouse, vole, shrew, and mole.

The Application will describe potential direct and indirect impacts to mammal species reasonably likely to occur on or in the vicinity of the Study Area, including any potential mitigation and avoidance measures that will be undertaken, as required or appropriate.

#### Avian

The Project Area habitats are typical of those that support many common species of songbird, American crow, turkey vulture, red-tailed hawk, and American kestrel. Farm ponds located within the Project Site may provide habitat for common waterfowl such as mallard.

The Application will include descriptions of potential direct and indirect impacts to avian species reasonably likely to occur on or in the vicinity of the Study Area, including any potential mitigation and avoidance measures that will be undertaken, as required or appropriate.

### **Natural Communities or Habitats of Special Concern**

An online review of the United States Fish and Wildlife Service (USFWS) Environmental Conservation Online System (ECOS), and the NYSDEC Environmental Resource Mapper (ERM), indicated that there are no known significant natural communities or habitats of special concern located within the Project Area. As such, the Applicant does not anticipate adverse impacts to any federal or state-listed significant natural community, habitat of special concern, U.S. National Wilderness Area, or USFWS Critical Wildlife Habitat.

### **Threatened and Endangered Species**

#### *Federally Listed Threatened and Endangered Species*

Initial contact has been made with the USFWS to discuss conservation measures and evaluate potential impacts to species identified within the Project Area. The USFWS Information for Planning and Conservation (IPaC) resource was used to determine the potential for federal listed threatened or endangered species, critical habitats, migratory birds or other natural resources in the vicinity of the Project Area (see Appendix E).

The USFWS IPaC Official Species List identified one species, the northern long-eared bat (*Myotis septentrionalis*), as potentially occurring within the Project Area vicinity. The northern long-eared bat is listed as a threatened species at the state and federal levels. The northern long-eared bat is a small bat, measuring an average of approximately three inches in total length. Adults weigh between five and eight grams.

During the spring and summer months, northern long-eared bats spend the day roosting in trees or artificial structures, switching to a new roost every other day on average. Roost trees are defined as any tree with over three inches diameter at breast height. More specifically, typical roost trees also contain cracks, crevices, or hollows that enable the bat to roost during the day. Most roost trees are either dead, desiccated, or contain deep furrows, hollows, or peeling bark to allow for effective roosting. In the fall, northern long-eared bats migrate to caves to hibernate over the winter months. This species typically hibernate together with much larger numbers of bats of other species, although hibernating groups of northern long-eared bats still number in the hundreds. Due to the spread of white-nose syndrome within hibernacula and this species' sharing hibernacula, northern long-eared

bats (from hibernacula counts) have declined by up to 99 percent in the Northeast, causing it to be listed federally as a threatened species (USFWS, 2016).

#### State Listed Threatened and Endangered Species

The NYSDEC's online ERM tool was accessed for information on state-listed protected species or significant natural communities in the Project Area vicinity. The results of the ERM review indicate no known occurrences of "Rare Plants and Rare Animals" or significant natural communities in the vicinity of the Project. Initial contact has been made with the New York Natural Heritage Program (NYNHP) and NYSDEC to discuss conservation measures and evaluate potential impacts to state-listed species potentially located within the Project Area.

#### *Grassland Breeding Birds*

As the Project Area includes areas of grasslands, in May 2018, the Applicant developed a Grassland Breeding Bird Survey Site-Specific Work Plan to describe the approach for determining presence and site use by state-listed threatened/endangered and rare grassland bird species during the breeding season (see Appendix F). The Work Plan was submitted to NYSDEC for review, and input provided by NYSDEC was incorporated into the plan. Field surveys were conducted on a weekly basis from May 21 to July 20, 2018. The results of these surveys are currently being assessed and a final report summarizing the findings will be submitted to NYSDEC, subject to any required confidentiality protections, and will be included in the Application.

#### **Invasive Species Management**

The Application will include a comprehensive list of the invasive plant species that were observed within the anticipated limits of disturbance during the field investigations. Invasive species are known to spread through vectors such as construction vehicles and equipment. In order to mitigate this potential, the Application will incorporate an Invasive Species Control Plan (ISCP), which will include measures to educate workers, mitigate the risk of imported fill introducing invasive species, clean equipment effectively, develop site grading plans and erosion and sediment control plans designed to mitigate the chance of spreading invasive species, and also establish a monitoring regime for invasive species spread post-construction.



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

### **Proposed Studies**

The Applicant proposes to collect, evaluate and provide the following information to support and prepare Exhibit 22 of the Application in accordance with §1001.22:

- (a) An identification and description of the type of plant communities present on the Project Area, the interconnections, and adjacent properties, based upon field observations, desktop review of literature, and data collection, consistent with the nature of the site and access control to adjacent properties.
- (b) An analysis of the temporary and permanent impact of the construction and operation of the Project and the interconnections on the vegetation identified, including a mapped depiction of the vegetation areas showing the areas to be removed or disturbed, and including a plan to identify the presence of invasive species and to prevent the introduction and/or spread of invasive species.
- (c) An identification and evaluation of reasonable avoidance measures or, where impacts are unavoidable, mitigation measures, including use of alternative technologies, that will be implemented to avoid, minimize, and potentially mitigate, to the maximum extent practicable, for any temporary and permanent impacts to existing, non-invasive plant communities as a result of the construction and operation of the Project.
- (d) A characterization of the Project Site and any areas to be disturbed for interconnections as to the vegetation, wildlife (including mammals, birds, amphibians, terrestrial invertebrates, and reptiles) and wildlife habitats, that occur in, on, or in the vicinity based on reconnaissance or multi-season surveys and data collection appropriate to the nature of the

site, supplemented by available data from the NYNHP, New York State (NYS) Amphibian and Reptile Atlas Project, the NYS Breeding Bird Atlas and range maps, Breeding Bird Survey Routes, Christmas Bird Counts and other similar reference sources, including an identification and depiction of any unusual habitats or significant natural communities that could support state or federally listed endangered or threatened species or species of special concern. Note that wetlands are addressed separately in paragraphs (i) through (p).

- (e) The Application will include lists of mammals, birds, amphibians, terrestrial invertebrates, and reptiles reasonably likely to occur on, or in the vicinity of the Project Site and areas to be disturbed for interconnections based on site observations and supplemented by publicly available sources, including those identified in paragraph (d) above.
- (f) An analysis of the impact of the construction and operation of the Project and interconnections on vegetation, wildlife, wildlife habitats (including a discussion of impacts from habitat fragmentation), and wildlife travel corridors, if identified, including a detailed assessment of direct and indirect impacts and identification and evaluation of the expected environmental impacts of the Project on declining species, Species of Greatest Conservation Need (SGCN), and species protected by State and Federal law and the habitats of such species. Given the provisions of §3-0301(2)(r) of the Environmental Conservation Law and §15 of the Public Service Law, information that identifies the locations of habitats of such species or any other species or unique combination of species of flora or fauna where the destruction of such habitat or the removal of such species there from would impact their ability to survive, shall not be disclosed to the public and shall only be disclosed to the parties to a proceeding pursuant to an appropriate protective order.
- (g) An identification and evaluation of reasonable avoidance measures or, where impacts are unavoidable, measures to minimize impacts to the maximum extent practicable, including the use of alternative technologies, regarding impacts to vegetation, wildlife and wildlife habitat.
- (h) Specific impacts to avian and bat species related to wind powered facilities is not applicable to this Project.

- (i) A map showing delineated boundaries based on on-site identification of all federal, state and locally regulated wetlands present on the Project Site and within 500 feet of areas to be disturbed by construction, including the interconnections, for land under control by the Applicant; and predicted presence and extent of wetlands on the remainder of site properties and adjacent properties within 500 feet of areas to be disturbed by construction. For adjacent properties without accessibility, initial surveys may be based on remote-sensing data, interpretation of published wetlands and soils mapping and aerial photography. This methodology is consistent with the May 31, 2018 “Advice to Applicants” issued by DPS Staff concerning the delineating and mapping of federal, state and locally regulated wetlands present on the site within 500 feet of areas to be disturbed by construction.
- (j) A description of the characteristics of all federal, state and locally regulated wetlands delineated as described above, including the Cowardin classification, and a description of the vegetation, soils, and hydrology data collected for each of wetland sites identified, based on actual on-site wetland observations.
- (k) A qualitative and descriptive wetland functional assessment, including seasonal variations, for all wetlands delineated above for groundwater recharge/discharge, floodflow alteration, fish and shellfish habitat, sediment/toxicant retention, nutrient removal, sediment/shoreline stabilization, wildlife habitat, recreation, uniqueness/heritage, visual quality/aesthetics, and protected species habitat.
- (l) An analysis of all off-site wetlands that may be hydrologically or ecologically influenced by the development of the Project Site and the wetlands identified above, observed in the field where accessible to determine their general characteristics and relationship, if any, to wetlands delineated as above.
- (m) An identification of temporary and permanent impacts to wetlands (and any state-regulated 100-foot adjacent areas) based on the proposed footprint of all Facility components and associated impact assumptions.

- (n) An identification and evaluation of reasonable avoidance measures or, where impacts are unavoidable, mitigation measures to be employed regarding the wetlands and adjacent areas impacts, including the use of alternative technologies and control of potential phosphorus and nitrogen sources from the Project. Where appropriate, mitigation shall include plans for compensatory mitigation. Such plans shall contain sections on grading, planting, and monitoring for success.
- (o) An identification of state and federal endangered or threatened species on the Project Site or that could be subject to impacts from the Project construction, operation, or maintenance, including incidental takings, and an endangered or threatened species mitigation plan, if applicable.
- (p) An Invasive Species Control Plan (ISCP) indicating the presence of invasive species and measures that will be implemented to minimize, to the maximum extent practicable, the introduction of new invasive species and spread of existing invasive species during soil disturbance, vegetation management, transport of materials, and landscaping/revegetation.
- (q) An analysis of the temporary and permanent impacts of the construction and operation of the Project and interconnections on agricultural resources, including the acres of agricultural land temporarily impacted, the number of acres of agricultural land that may be considered permanently converted to nonagricultural use, and mitigation measures to minimize the impact to agricultural resources, to the maximum extent practicable.
- (r) In coordination with NYSDEC, High River Energy Center, LLC conducted grassland breeding bird surveys from May 21 to July 20, 2018 in accordance with a work plan reviewed by NYSDEC. The results of this survey will be provided in the Application, as will an assessment of any potential impacts to grassland bird species habitat as a result of the Project.

### 3.23 Aquatic Ecology and Water Resources (Exhibit 23)

Exhibit 23 of the Application will include a review of the Project Area's surface water resources, groundwater resources, and associated aquatic ecology. The review will involve a summary and mapping of existing conditions, an in-depth impact analysis of the Project, and will outline impact avoidance and mitigation measures to be undertaken by the Applicant.

#### **Groundwater**

A preliminary review of the Project Area indicates that the depth to the water table for 13 of the soils mapped in the Project Area by the NRCS ranges from 0 inches (surface) to 80 inches, and 9 soils mapped have a depth to water table greater than 80 inches. One of the soil map units has a depth to lithic bedrock of 10 to 20 inches, four have a depth to lithic bedrock of 20 to 40 inches, and the remainder of the map units are each listed as having a depth to a restrictive layer of greater than 80 inches (USDA NRCS, 2018).

Primary aquifers are defined by the USGS and the NYSDEC as *"highly productive aquifers presently utilized as sources of water supply by major municipal water supply systems"* (NYSDEC, 1990). Based upon preliminary review of agency mapping, the Project Area does not contain any portion of a primary aquifer. The closest primary aquifer is the Schenectady Aquifer, the boundary of which is approximately 1.1 miles southeast of the Project Area, generating within the Town of Rotterdam, Schenectady County, New York (Brown et al., 1981).

Principal aquifers are defined as *"aquifers known to be highly productive or whose geology suggests abundant potential water supply, but which are not intensively used as sources of water supply by major municipal systems at the present time"* (NYSDEC, 1990). Based upon preliminary review of agency mapping, the Project Area does not contain any portion of a principal aquifer. The nearest principal aquifer is associated with the Mohawk River, less than one mile north of the Project Area.

The Hudson-Mohawk sheet of the *"Potential Yields of Wells in Unconsolidated Aquifers in Upstate New York"* map (Bugliosi et al., 1988) does not indicate the presence of unconsolidated groundwater aquifers beneath the Project Area (see Figure 11). The map does, however, indicate the presence of one aquifer of unknown potential within the northern part of the Project Area. This aquifer is identified with the map unit "L," representative of aquifers formed in lacustrine or eolian deposits of fine to

medium sand. Per Bugliosi et al., the yield potential for aquifers mapped as “L” is probably less than 10 gallons per minute.

The Application will provide maps based upon publicly available information and the preliminary geotechnical investigation to depict depth to the water table, depth to bedrock, groundwater aquifers, and groundwater recharge areas for the entire Project Area. Groundwater aquifer maps will also be prepared based upon publicly available information depicting groundwater flow direction, groundwater quality, groundwater well locations, and associated exclusion zones where information is readily available. These maps will be based on information gathered from the NYSDEC Division of Water Resources, Bureau of Water Management, USGS Office of Groundwater, the USDA NRCS Web Soil Survey, and information gathered through research and outreach from the Applicant.

To identify water wells within the Project Area, a Freedom of Information Law (FOIL) request letter will be sent to the Montgomery County Department of Health and the NYSDEC to request access to all publicly available water well information. The Application will include information received from the NYSDEC and Montgomery County on water wells, including location, depth, yield, and use, if such data are available. Figure 12 provides preliminary identification of currently mapped water wells.

Excavations for foundations and access roads are expected to be relatively shallow and are not anticipated to intercept groundwater within the surrounding aquifers. The solar arrays will be set back from residences, and therefore the majority of earthwork activities are generally not planned to occur in close proximity to residential drinking water wells. Construction of the Project will adhere to a Spill Prevention Control and Countermeasure (SPCC) plan and a SWPPP to prevent significant adverse impacts such as contamination and/or erosion due to surface runoff.

The Project may result in small, sparsely distributed areas of impervious surface within the Project Area. The Application will provide an analysis to summarize potential impacts to public and private drinking water supplies, groundwater quality, and associated aquifers within one mile of the Project Area. The Application will include analyses to address anticipated temporary impacts arising from any necessary dewatering for construction activities.

An analysis of any potential impacts to drinking water supplies due to construction or operations of the Project will be included in the Application including characterization of the type, nature, and extent of service provided from the identified source. Additional detail regarding groundwater impacts will be supported in the Application with results from a preliminary geotechnical investigation. Specific avoidance and mitigation measures that will be implemented to protect groundwater resources during construction of the Project will also be provided.

### **Surface Water**

The Application will provide Project Area surface water maps compiled from NYSDEC, Esri, and Montgomery County data, as well as data collected for all streams during ongoing site-specific wetland and waterbody delineation surveys.

The Project Area is located within the Mohawk River drainage basin of New York (USGS Hydrologic Unit Code 02020004) and the Mohawk/Alplaus Kill watershed (Hydrologic Unit Code 0202000411). According to the NYSDEC, the Mohawk River drainage basin covers an area of approximately 3,460 square miles. The entirety of Montgomery County is covered by this basin, which also incorporates portions of Schoharie, Schenectady, Greene, Fulton, Herkimer and Oneida Counties, and small portions of Albany, Saratoga, Delaware, Otsego, Hamilton, Madison and Lewis Counties. This Mohawk River originates in a valley formed between the higher elevations of the western Adirondacks and the Tug Hill Plateau. It flows approximately 140 miles to the east to join the Hudson River. Based on water quality measurements, rivers and lakes within the Mohawk River basin are rated variously as poor, satisfactory, and good. Acid rain, sewer overflow and urban runoff have caused impacts to some of the larger lakes in the watershed. Various nonpoint source pollutions from farms are the most frequently cited source of impacts due to the mostly rural setting.

The NYSDEC classifies New York's streams as AA, A, B, C, and D. Classes AA or A are assigned to streams with the highest water quality. The best uses of class AA or A streams are: water supply for drinking; culinary or food processing purposes; primary and secondary contact recreation; and also fishing. Class B waters are suggested to only be used for primary and secondary contact recreation and fishing. The best usage of Class C waters is fishing and non-contact related activities. Class D waters represent the poorest water quality standard, and it is advised that recreational activities do not occur within this

water class. Waters with classifications A, B, and C may also have a standard of (T), indicating that it may support a trout population, or (TS), indicating that it may support trout spawning.

All streams and small waterbodies located in the course of a stream with a classification of AA, A, or B, or with a classification of C with a standard of (T) or (TS) are collectively referred to as "protected streams." Special requirements also apply to sustain (T) and (TS) waters that support sensitive fisheries resources.

Streams or other bodies of water that appear as lines to indicate natural waters on the NYSDEC's reference maps, and which are not specifically classed by the NYSDEC, are assigned the same classes and standards of quality and purity as the specifically designated waters to which they are directly tributary. Additionally, all streams or other bodies of water that are not shown on the NYSDEC's reference maps are assigned to class D, as set forth in Part 701, *supra*, except that any continuous flowing natural stream that is not shown on the reference maps is assigned the same classification and standards as the waters to which they are directly tributary (6 CRR-NY 876.2). The section of the Mohawk River into which the Project Area drains is listed by the NYSDEC as a Class C waterbody. As such, all perennial, direct tributaries to the Mohawk River in the Project Area that are not classed otherwise are also considered to be Class C waters.

A Wetland and Waterbody Report, which will be appended to the Application, will describe the characteristics of all delineated streams. The report will include a summary of each streams' flow regime, watershed association, National Wetlands Inventory (NWI) classification, physical characteristics (e.g. bed, banks, etc.), and assumed jurisdictional status. Figure 13 shows their mapped locations. All of the streams are part of the watershed identified as Hydrologic Unit Code (HUC) 020200041101. The design goal of the Project is to minimize, to the maximum extent practicable, impacts to wetlands.

The Application will describe the characteristics of all Project Area streams, including water quality, flow regime, and general aquatic ecology. Based upon a review of publically available mapping, and initial on-site ecological surveys, there are multiple streams within the Project Area; however, they are all Class C streams and are therefore not regulated by the state. The Application will incorporate information acquired from publicly available data sets and from any field data that documents



NYSDEC-listed invasive species observations made during the on-site stream delineations. Preliminary siting of Project components will include measures to avoid and/or mitigate temporary or permanent impacts to surface waters. Mitigation measures will include those commonly used and approved SPDES Stormwater Permits. Accordingly, a preliminary SWPPP will be included in the Application describing these avoidance/mitigation measures.

The Application will describe and quantify any anticipated direct or indirect stream impacts associated with the construction of the Project. Any surface water impacts are anticipated to occur primarily from access road and collection line crossings. The number and linear feet of stream impacts due to access road crossings will be minimized by routing around streams whenever possible and utilizing existing crossings and narrow crossing locations to the extent practicable. Attempts, when feasible, will be made to upgrade existing crossings that are in disrepair or are undersized.

When the crossing of a surface water resource is deemed necessary for the Project, BMPs based on those previously adopted by the Siting Board will be employed. Proper briefing and signage will be provided to construction crews to dictate areas where equipment access is prohibited. Crossings of streams and wetlands will only occur along permitted access roads or through non-jurisdictional use of temporary matting.

Restrictions on activities within a predetermined buffer zone adjacent to delineated streams, wetlands, and other waters will include:

- No equipment refueling or washing;
- No storage of petroleum or chemical materials;
- No disposal of concrete or wash water;
- No amassing of construction debris or accumulation of slash materials in the area;
- No use of herbicides within the area; and
- No actions that may result in the degradation of stream banks or steep slopes above water resources.

A FOIL request for the location of all downstream surface drinking water intake sites within one-mile of the Project Area will be sent to the Montgomery County Department of Health. These locations will

be depicted in a figure set provided as an appendix to the Application. If no intake sites are listed in this search radius, the nearest intakes downstream of the Project will be described. Information on the design, nature, and extent of services of each listed intake site will be provided within Exhibit 23 of the Application where readily available.

An erosion and sediment control plan (ESCP) will be prepared as part of the SWPPP and as required per the SPDES General Permit to limit the possibility of soil erosion and sedimentation within water resources throughout the Project Area. Silt fences, hay bales, siltation catch basins, check dams, and/or other standardized sedimentation control measures will be installed and maintained throughout the construction and operation phases of the Project until impacted areas become stabilized. To facilitate soil stabilization, exposed soils will be seeded and mulched in a timely manner to reduce the risk of sedimentation events arising from storm events. Control measures will be dictated in the Project SWPPP (see below). Their locations and design will be shown on appropriate construction drawings. As part of the SWPPP, a monitor will be in place throughout the work period and during the restoration period in order to inspect and assess sedimentation risk, and to mitigate any unforeseen issues specific to the nature of the Project Area.

### **Stormwater**

The Applicant will issue a Notice of Intent (NOI) for Stormwater Discharges from Construction Activity, and will seek coverage under the SPDES General Permit prior to commencement of construction operations.

The Application will include a preliminary SWPPP as an appendix, prepared in accordance with the New York State SDESC and the New York State Stormwater Management Design Manual. The preliminary SWPPP will include:

- A Project introduction that will review the purpose, need, and appropriate contents of the complete SWPPP;
- Anticipated stormwater management practices, including erosion and sediment control measures;
- Anticipated construction activities, including a preliminary construction phasing schedule and definition of disturbance areas;

- Site waste management and spill control measures;
- Proposed site inspection and maintenance measures, including construction site inspection, and construction site record keeping; and
- Conditions that will allow for the termination of permit coverage.

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

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

#### **Chemical and Petroleum Bulk Storage**

A preliminary SPCC plan will be created to be implemented during the construction and operation of the Project to prevent the release of hazardous substances into the environment, especially near water resources. As mentioned previously, all refueling operations will be required to occur outside of the predetermined buffer area around wetlands and streams within the Project Area. All contractors will be required to have spill kits on hand to control any spills. This requirement and a list of the materials included in the kits will be explained in more detail within the SPCC plan and SWPPP provided to contractors. Spills will be reported in accordance with state and federal guidelines and the contractor will be required to adhere to both the SWPPP and SPCC Plan.

The Applicant does not anticipate on-site storage or disposal of large volumes of substances regulated under the chemical and petroleum bulk storage programs of New York State. The Application will identify any petroleum or other hazardous chemicals that are necessary for construction and are proposed to be stored on-site, and will explain how applicable laws and guidelines for storage and disposal of such substances will be followed.

#### **Aquatic and Invasive Species**

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

The ISCP will evaluate reasonable avoidance/mitigation measures in order to reduce impacts to surface waters and any biological aquatic resources as well. The ISCP will involve predefined processes such as construction materials inspection, target species treatment and removal, construction equipment sanitation, and proper site restoration techniques.

#### **Cooling Water**

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

#### **Proposed Studies**

The Applicant proposes to collect, evaluate and provide the following information to support and prepare Exhibit 23 of the Application in accordance with §1001.23:

(a) Groundwater:

- (1) Hydrologic information reporting depths to high groundwater and bedrock, including a site map showing depth to high groundwater in increments appropriate for the Project Area.
- (2) A map based on publicly available information showing all areas within the Study Area delineating all groundwater aquifers and groundwater recharge areas, and identifying groundwater flow direction, groundwater quality, and the location, depth, yield and use of all public and private groundwater wells or other points of extraction of groundwater, and including delineation of wellhead and aquifer protection zones.
- (3) Based upon publicly available information, an analysis and evaluation of potential impacts (during normal and drought conditions) from the construction and/or operation of the Project on drinking water supplies, groundwater quality and quantity in the Project Area, including potential impacts on public and private water supplies, including private wells within a one mile radius of the Project Area, and wellhead and aquifer protection zones.

(b) Surface Water:

- (1) A map and identification of all surface waters, including intermittent streams, within the Study Area.
- (2) A description of the New York State listed Water Classification and Standards, physical water quality parameters, flow, biological aquatic resource characteristics (including species, habitat, and presence of aquatic invasive species) and other characteristics of such surface waters, including intermittent streams, within the Study Area.
- (3) An identification of any downstream surface water drinking-water supply intakes within one mile, or if none within one mile, an identification of the nearest one (giving location of the intakes by longitude and latitude) that could potentially be

affected by the Project or interconnections, including characterization of the type, nature, and extent of service provided from the identified source.

- (4) An analysis of the impact of the construction and operation of the Project and interconnections on such surface waters, including impacts, based upon publicly available information, to drinking water supplies, and an identification and evaluation of reasonable avoidance measures and, where impacts are unavoidable, mitigation measures regarding impacts on such surface waters, including the precautions that will be taken to avoid or minimize dredging.
- (5) An identification and evaluation of reasonable avoidance measures, and where impacts are unavoidable, mitigation measures, including the use of water storage, stormwater reuse, and offsetting water conservation, regarding groundwater impacts.

(c) Stormwater:

- (1) A preliminary Stormwater Pollution Prevention Plan (SWPPP) for the collection and management of stormwater discharges from the Project prepared in accordance with the applicable State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (SPDES General Permit) and the most current version of the New York State SDESC.
- (2) To the extent not covered in paragraph (1) above, a preliminary plan, prepared in accordance with the most current version of the New York State SDESC, that identifies the post-construction erosion and sediment practices that will be used to manage stormwater runoff from the developed Project Area. This can include runoff reduction/green infrastructure practices, water quality treatment practices, and practices that control the volume and rate of runoff.

(d) Chemical and Petroleum Bulk Storage:

- (1) The Applicant does not currently anticipate the on-site storage or disposal of large volumes of substances regulated under the chemical and petroleum bulk storage

programs of New York State. If construction operations require petroleum or other hazardous chemicals to be stored on-site, a description of the spill prevention and control measures to be in place for chemical storage, including an evaluation of alternatives and mitigation measures, will be included in the Application.

- (2) The Applicant does not anticipate the on-site storage of ammonia, fuel oil, wastewater, other chemicals, petroleum or other hazardous substances, or solid waste. However, if construction requires the storage of any of these hazardous chemicals regulated under the State of New York's chemical and petroleum bulk storage program, a demonstration of compliance with such regulation shall be provided in the Application.
- (3) The Applicant does not currently anticipate the on-site storage or disposal of large volumes of substances regulated under the chemical and petroleum bulk storage programs of any local laws. If construction operations require petroleum or other hazardous chemicals to be stored on-site, those substances will be identified within the Article 10 Application and all applicable laws and guidelines will be followed.

(e) Aquatic Species and Invasive Species:

- (1) An analysis of the impact of the construction and operation of the Project on biological aquatic resources, including species listed as endangered, threatened, or species of special concern in 6 NYCRR Part 182, and including the potential for introducing and/or spreading invasive species.
- (2) An identification and evaluation of reasonable avoidance measures and, where impacts are unavoidable, mitigation measures regarding impacts on such biological aquatic resources, including species and invasive species impacts (if any) and in compliance with applicable water quality standards (6 NYCRR Part 703).

- (f) This Project will not utilize cooling water during any phase of construction or operation and, therefore, cooling water withdrawals will not be addressed in the Application.

### 3.24 Visual Impacts (Exhibit 24)

A visual impact assessment (VIA) will be prepared for the Project and included in the Article 10 Application. The VIA will determine the extent and significance of the Project's visibility and will be performed according to the requirements as outlined in 16 NYCRR § 1001.24.

#### **Character and Quality of the Existing Landscape**

Prior to any investigation for visual analysis, a Visual Study Area (VSA) must be defined. A primary VSA of two miles is proposed for the Project due to the typical height of solar panels. GIS technical analyses will be emphasized on the two mile VSA. Additionally, due to hilly terrain and the potential for higher elevation views of the Project may exist, the area between two and five miles of the Project Area will also be reviewed to determine if there are any outstanding visual resources that are of concern in the region just outside of the two mile VSA (see Figure 14) The VSA primarily includes Montgomery and Schenectady Counties with a small corner of Saratoga County in the northeast segment near the five mile VSA boundary.

The definition of the VSA is currently proposed to be two and five miles around the property boundaries of the Project Area and not around the general perimeter outline of the solar array themselves. The towns within the two and five mile VSAs include:

- Towns within Two Mile VSA: Amsterdam, Duaneburg, Florida, Glenville, Princetown, and Rotterdam.
- Towns between Two and Five Mile VSA: Amsterdam, Charlton, Duaneburg, Florida. Glenville, Princetown, and Rotterdam.

Existing conditions and character of the landscape will be evaluated through the acquisition of GIS data, review of town and county reports, topographic data, and site visits along with photographic documentation. As part of evaluating existing conditions, Landscape Similarity Zones (LSZ) will also be defined. LSZs are areas of similar landscape/aesthetic character based on patterns of landform, vegetation, water resources, land use, and user activity, and are helpful in providing a framework for assessment and understanding the visual environment. Based on reconnaissance level investigations of the vicinity, the landscape in the Town of Florida and City of Amsterdam generally comprising the



north, west, and southern quadrants of the VSA is primarily a rural mix of farmland consisting of cultivated crops and hay-pasture land with small intermittent and isolated forest groups, many of which serve as vegetated riparian zones for local streams. The City of Amsterdam, located approximately two miles to the northwest of the Project Area, has low to medium intensity urban development. Dense rural forested areas become more predominant trending easterly between the two and five mile VSA in Princetown, Glenville, and Rotterdam.

Physiographically, the Project Area is approximately 0.75 miles south of the Mohawk River in a toe slope location. Several small hills are located within the two mile Study Area which will be evaluated to identify the potential for significant views from higher locations that look down on the Project. The two-mile VSA is within the confluence of several physiographic provinces. The Project Area is within the glaciated Allegheny Plateau province indicating less variable relief. Just north of the site a small band of the Hudson-Mohawk Lowlands straddles the Mohawk River and encompasses the associated valley. The southern edge of the Adirondack Mountain province is north of the river in Glenville and north Amsterdam. South of the Study Area lies the northern edge of the Catskill Mountains province.

### **Visibility of the Facility**

A full resources inventory will be conducted to understand areas of potential Project visibility from public access.

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

Photographic simulations will also be prepared to assess the quality of view from select viewpoint locations. Photographs to be used in simulations will be acquired during site visits. Several candidate locations for simulations will be chosen resulting from a number of preliminary investigations, with the assistance of the visual resources inventory in combination with the predicted visibility of the viewshed

analysis and on-the-ground site visits. The Applicant will consult with DPS Staff and other stakeholders for their input on the selection of additional viewpoints for simulations per 16 NYCRR § 1001.24 (b)(4) and (b)(4)(v).

#### **Visibility of Above-ground Structures and Interconnections**

A proposed collection substation and, adjacent thereto, an on-site POI switchyard is proposed to be built by the Applicant. Potential visibility of the aboveground facilities may be assessed either by viewshed analysis or photosimulations.

#### **Appearance of the Facility upon Completion**

Photosimulations will be prepared from selected vantage points in order to represent the appearance of the Project upon completion. A 3D model of the Project will be created according to engineering specifications to be used in visualization software. High resolution photography will be obtained as part of site visits to use in the simulations.

#### **Photographic Overlays**

To create the simulations, Autodesk 3DS MAX software will be used to correctly dimension a model of the Project into the digital photographic image from each viewpoint location. For a given vantage point, the visualization software is capable of providing and adjusting a camera view that matches that of the actual photograph. From the field effort, the documented camera coordinate (x,y,z) positions will be entered into the model using a sub-meter global positioning unit (GPS). A full frame digital camera with a fixed 50 mm focal length lens or a digital SLR with crop factor adjusted for 35 mm focal length equivalents will be used for obtaining photographs. A focal length of 50 mm will be used as it most closely resembles human vision. Reference locations, which are existing visible objects in the photograph such as light posts, building corners, trees, gate posts or utility poles will be obtained as part of the field task to assist with refined placement of the proposed Project within the photograph. High point references will be measured with a digital rangefinder.

#### **Nature and Degree of Visual Change**

The two-mile VSA outside of the City of Amsterdam is primarily a rural mix of farmland consisting of cultivated crops and hay-pasture land with small intermittent and isolated forest groups, many of which serve as vegetated riparian zones for local streams. The Appalachian Mountain physiographic

province to the north and the Catskill Mountain Province to the south boundaries occur near the two mile VSA where topographic elevations begin to increase.

Existing visual and landscape characteristics of the Project will be described in the Application. Predicted visibility in the landscape from the Project will be provided by viewshed analyses and areas of visibility in relation to visual resources will be discussed. Descriptions of how land characteristics, including tree cover or topography might preclude views, will be described as well. To assess the quality of views, a comparison of existing conditions against Project conditions provided by photographic simulations with a comparison rating system applied. Simulations will be made from vantage points from public areas with the most open views to the Project as possible.

#### **Related Operational Effects of Facility**

The Application will contain an analysis and description of potential glare related effects during operation of the Project. Photovoltaic panels are constructed with non-reflective coatings and/or glass. These panels are designed specifically to absorb as much sunlight as possible in order to maximize electrical generation, rather than reflect sunlight. Further, the metal supports that form the racking system are typically constructed using galvanized steel or aluminum and therefore will not reflect sunlight.

#### **Measures to Mitigate for Visual Impacts**

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

#### **Description of Visual Resources to be Affected**

Local, state, and federal visual resources will be investigated per 16 NYCRR § 1001.24(b)(4)(ii). These are areas such as landmark landscapes; wild, scenic or recreational rivers administered respectively by either the NYSDEC or Department of Interior pursuant to 16 USC § 1271; forest preserve lands, conservation easement lands, scenic byways designated by the federal or state governments; Scenic districts and scenic roads, designated by the Commissioner of Environmental Conservation pursuant

to ECL Article 49 scenic districts; Scenic Areas of Statewide Significance; state parks or historic sites; sites listed on National or State Registers of Historic Places; areas covered by scenic easements, public parks or recreation areas; locally designated historic or scenic districts and scenic overlooks; and high-use public areas.

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

### **Proposed Studies**

The Applicant proposes to collect, evaluate and provide the following information to support and prepare Exhibit 24 of the Application in accordance with §1001.24:

- (a) The Application will include a VIA to determine the extent and assess the significance of Project visibility. The components of the VIA will include identification of visually sensitive resources, viewshed mapping, confirmatory visual assessment fieldwork, visual simulations (photographic overlays), cumulative visual impact analysis, and proposed visual impact mitigation. The VIA will address the following:
  - (1) the character and visual quality of the existing landscape.
  - (2) visibility of the Project, including visibility of Project operational characteristics.
  - (3) visibility of above-ground interconnections, if proposed, and roadways to be constructed within the study area as determined by the viewshed analysis.
  - (4) appearance of the Project upon completion, including structure size, architectural design, facade colors and texture, and lighting associated with the collection substation;
  - (5) lighting (including lumens, location and direction of lights for facility Area and/or task use, safety including worker safety and tall structure marking requirements) and similar features including a discussion on the minimization of upward-directed lighting;
  - (6) representative views (photographic overlays) of the Project, including front, side and rear views, indicating approximate elevations; from select resource locations

representing as practical as possible, views from the north, south, east, and west compass locations;

- (7) nature and degree of visual change resulting from construction of the Project and above-ground interconnections;
- (8) nature and degree of visual change resulting from operation of the Project;
- (9) analysis and description of related operational effects of the Project such as glare. A discussion on any potential glare impacts will be provided in the Application. No plumes, shading, or shadow flicker are anticipated.
- (10) proposed reasonable mitigation measures based on an assessment of mitigation strategies including screening (landscaping), architectural design, visual offsets, relocation or rearranging facility components), reduction of facility component profiles, alternative technologies, facility color and design, lighting options for work areas and safety requirements, and lighting options for aviation obstruction lighting if required by the FAA.
- (11) a description of all visual resources that would be affected by the facility that are within a radius of at least two miles from all the Project Area boundaries.

(b) The viewshed analysis component of the VIA will be conducted as follows:

- (1) A digital GIS based viewshed analysis will be prepared using Esri ArcGIS Spatial Analyst software for this Project and will include vegetated tree groups to realistically depict the surrounding landscape. The results will be prepared and presented on a 1:24,000 scale current USGS base map. The viewshed maps shall provide an indication of areas of potential visibility based on topography and vegetation and the highest elevation of Project structures. The potential screening effects of vegetation shall also be shown. The map(s) shall be divided into foreground, midground and background areas based on visibility distinction and distance zone criteria. Visually-sensitive sites, cultural and historical resources, representative viewpoints, photograph locations, and public vantage points, and landscape similarity zones within the viewshed study area shall be included on the map(s) or an overlay. An overlay indicating landscape similarity zones shall be included. A line of sight profile shall also be done for resources of statewide concern located within the Visual Study Area, if applicable.

- (2) The VIA will include a detailed description of the methodology used to develop the viewshed maps, including software, baseline information, and sources of data.
- (3) The viewshed mapping will be used to determine potential visibility of viewer groups in the Project Study Area.
- (4) Viewer groups will include recreational areas (i.e., golf course, state and local parks, recreational waterways, etc.), residences, businesses, listed State or National Register of Historic Places sites, and travelers (interstate and other highway users).
- (5) The applicant shall confer with the appropriate municipal representatives, DPS, NYSDEC and OPRHP. Viewpoint selection will be based upon the following criteria:
  - (i) representative or typical views from unobstructed or direct line-of-sight views from locations predicted to have direct line-of-sight visibility of facilities components, based on results of preliminary viewshed mapping;
  - (ii) significance of viewpoints designated scenic resources, areas or features which features typically include, but are not limited to: landmark landscapes; wild, scenic or recreational rivers administered respectively by the NYSDEC pursuant to ECL Article 15 or Department of Interior pursuant to 16 USC Section 1271; forest preserve lands, scenic vistas, conservation easement lands, scenic byways designated by the federal or state governments; Scenic districts and scenic roads, designated by the Commissioner of Environmental Conservation pursuant to ECL Article 49 scenic districts; state parks or historic sites; sites listed on or eligible for listing on National or State Registers of Historic Places; areas covered by scenic easements, public parks or recreation areas; nearby NYS Forest Lands, locally designated historic or scenic districts and scenic overlooks; National Rivers Inventory listed or candidate waterways; and high-use public areas;
  - (iii) level of viewer exposure, i.e., frequency of viewers or relative numbers, including residential areas, or high volume roadways;
  - (iv) proposed land uses identified in publicly available, government-published data bases;
  - (v) verifiable input provided from local public sources; and

- (vi) building/structure data collected for each potentially eligible property prepared in a format acceptable to OPRHP and DPS and submitted to OPRHP and DPS for review prior to completing the viewpoint selection.
- (6) Photographic simulations of the Facility and interconnections shall be prepared from the representative viewpoints to demonstrate the post-construction appearance of the Project. Where vegetation screening is relied on for project mitigation, leaf-off (i.e., wintertime) and leaf-on (i.e., summertime) simulation shall be provided. Representative viewpoints shall be established in consultation with DEC, DPS, OPRHP, and a three-dimensional model of the Project built according to site engineering specifications will be prepared from select viewpoint locations. Photographs to be used in simulations will be acquired during site visits and will represent leaf-off conditions. An appropriate number of candidate locations for simulations will be chosen resulting from a number of preliminary investigations, surveys and stakeholder input, with the ultimate focus on the visual resources inventory in combination with the predicted visibility of the viewshed analysis and on-the-ground site visits.
- (7) Additional revised simulations illustrating mitigation of the Project, such as through use of screening, will be considered. Discussion of other general mitigation strategies such as design and layout will be discussed in the Application. If mitigation is proposed, simulations will be prepared illustrating the incorporated mitigation, as it appears from the final selected observation points.
- (8) Each set of existing and simulated view of the Project shall be compared and rated and the results of the VIA shall be summarized. Documentation of the steps followed in the rating and assessment methodology shall be provided including results of rating impact panels and a description of the qualifications of the individuals serving on the panels. Where visual impacts from the proposed Project are identified, potential mitigation measures shall be outlined, and the extent to which they effectively minimize such impact shall be addressed.

- (9) As applicable to the proposed Project technology, the analysis shall include analyses of overall appearance and operational characteristics of the Project and related facilities, including night-lighting, glare, or related visible effects of Facility operations, including an assessment of the predicted extent, frequency and duration of any such visible effects created by the Project.



### 3.25 Effects on Transportation (Exhibit 25)

The Application will present a description of existing, pre-construction roadways and their associated usage within the Project Area and the larger Study Area. The Study Area is currently served by a network of state, county, and local roadways. Existing roads within the Study Area range from two-lane highways with paved shoulders to seasonally maintained dirt/gravel roads. Data will be obtained from the New York State Department of Transportation (NYSDOT) Traffic Data Online Viewer to review existing traffic volumes along the proposed routes for delivery of Project components, construction, and operation of the Project.

The Application will include a site plan depicting the location and dimensions of all Project related access roads used for construction, maintenance, and operation within the Project Area. The detailed roadway descriptions included in Exhibit 25 of the Application will include existing vehicle traffic, general use levels, accident occurrence levels, school bus service areas, and emergency response vehicle departure routes to and from the Project based upon publicly available information. The load bearing and structural rating of existing roads within proximity of the Project Area will be specified in the description. An analysis of the suitability of existing road surfaces and intersections for transport of Project related materials will be provided. Consultation with local, state and federal transportation agencies, highway departments, and emergency responders will be conducted

It is anticipated that existing roadways within and surrounding the Project Area will have adequate capacity for accommodating deliveries for Project construction. Most construction deliveries are anticipated to occur utilizing flatbed trucks. No over-size deliveries are anticipated to be required. Information on the approximate size and number of construction vehicles necessary for Project construction will be included in the Application.

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

Once construction of the Project is complete, transportation levels during operations will be minimal. Maintenance activities will generally involve individuals or small crews and utility crew pick-up trucks, which are typical vehicles currently in use in this rural area. Normal, scheduled maintenance activities may involve monthly visits to the Facility. Such service visits typically involve one to two pick-up trucks. If an unscheduled repair of a significant component should be required, larger vehicles similar to those used during typical commercial construction may be required for a short duration and limited location. The Applicant is responsible for the maintenance of all private access roads leading to the solar array location. The Application will provide O&M procedures that will provide more detail on scheduled and unscheduled maintenance.

An evaluation of the traffic and transportation impacts of the Facility from construction related activities will be provided in Exhibit 25 of the Application. Mitigation and safety measures will be proposed if any adverse impacts are identified. Exhibit 25 will include a road use survey, with traffic patterns, accident rates, and school bus routes. To help assess impacts to emergency services, Exhibit 25 will include a map showing locations of emergency services providers relative to the Study Area.

#### **Proposed Studies**

The Applicant proposes to collect, evaluate and provide the following information to support and prepare Exhibit 25 of the Application in accordance with §1001.25:

- (a) A conceptual site plan, drawn at an appropriate scale, depicting all facility site driveway and roadway intersections, showing:
  - (1) Horizontal and vertical geometry, the number of approach lanes, the lane widths, shoulder widths, traffic control devices by approaches, sight distances.
  - (2) There are no wind turbine sites proposed as part of the Project, therefore this section of the Exhibit 25 regulation is not applicable.
- (b) A description of pre-construction characteristics of roads in the vicinity of the Project, including:
  - (1) A review of existing data on vehicle traffic, use levels and accidents.

- (2) A review of transit facilities and routes, including areas of school bus service.
  - (3) An identification of potential approach and departure routes to and from the Project Area for police, fire, ambulance and other emergency vehicles.
  - (4) The load bearing and structural rating of existing roads will be specified in the detailed roadway descriptions.
  - (5) The Project Area is not within a congested urbanized area, therefore 24-hour traffic volume counts and peak turning movement counts for typical weekday morning, weekday afternoon, and Saturday peaks, at representative critical intersections are not applicable and will not be included in the Application.
- (c) The Study will include an estimate of the trip generation characteristics of the Project during both construction and operation. The estimate will include:
- (1) For each major phase of construction, and for the operation phase, an estimate of the number and frequency of vehicle trips, including time of day and day of week arrival and departure, distribution, by size, weight and type of vehicle.
  - (2) An identification of approach and departure routes to and from the Project Area out to a 5-mile distance for vehicles carrying water, fuel oil, bulk fuels (including wood, biomass, coal, and municipal solid waste), chemicals or hazardous materials for construction or operation of the Project will not be presented in the Application because deliveries of these materials is not proposed.
  - (3) For major cut or fill activity (spoil removal or deposition at the Project Area and affected interconnection areas), a separate estimate of the number and frequency of vehicle trips, including time of day and day of week arrival and departure, distribution, by size, weight and type of vehicle.
  - (4) An identification of approach and departure routes to and from the Project Area for construction workers and employees of the Project.
- (d) The Study will include an analysis and evaluation of the traffic and transportation impacts of the Project, including:

- (1) Because the Project will have no significant impact on traffic following the construction phase, no analysis of future traffic conditions with and without the Project will be prepared;
  - (2) An evaluation of the adequacy of the road system to accommodate the projected traffic during peak construction, the analysis to also include an identification of the extent and duration of traffic interferences during construction of the Facility and any interconnections;
  - (3) No over-size load deliveries are anticipated. Should any be required, the Application will include an assessment of over-size load deliveries and the adequacy of roadway systems to accommodate oversize and over-weight vehicles; improvements necessary to accommodate oversize or overweight deliveries; impacts associated with such improvements; and mitigation measures appropriate to minimize such impacts;
  - (4) An identification and evaluation of practicable mitigation measures regarding traffic and transportation impacts if needed, including timing restrictions, the use of alternative technologies, the construction of physical roadway improvements, and the installation of new traffic control devices as well as the repair of local roads due to the damage by heavy equipment or construction activities during construction or operation of the Project.
  - (5) A description of all road use and restoration agreements, if any, between the Applicant and landowners, municipalities, or other entities, regarding documentation and repair of local roads damaged by heavy equipment or construction activities during construction or operation of the Project.
- (e) An analysis and evaluation of the impacts of the Facility on mass transit systems will not be presented in the Application as there are none within the Study Area. An analysis and evaluation of any impacts on airports and airstrips, or on military training and frequent military operations in the National Airspace System and Special Use Airspace designated by the Federal Aviation Administration will be included, if any.
- (f) No construction or alteration is proposed that requires a Notice of Proposed Construction to be submitted to the administrator of the Federal Aviation Administration (FAA) in

accordance with 14 Code of Federal Regulations, Part 77 pursuant to 49 U.S.C., Section 44718.

### 3.26 Effects on Communication (Exhibit 26)

The Project is not anticipated to interfere with any existing communication systems. The Facility will lack tall structures and exposed moving parts, and it is anticipated that it will generate only very weak electromagnetic fields (EMF) at the property boundaries. The Application will document publicly known communication sources above and below ground within the Project Study Area, including the following: underground cables and fiber optic lines, AM radio, FM radio, television stations, telephone systems, microwave transmission (all affected sources, not limited to a two-mile radius from all the Project Area boundaries), emergency services communication systems, municipal/school district services, public utility services, Doppler/weather radar (all affected sources, not limited to a two-mile radius from all Project Area boundaries), air traffic control (all affected sources, not limited to a two-mile radius), Department of Defense (DOD)/Armed Forces (all affected sources, not limited to a two-mile radius), global positioning systems, Loran (all affected sources, not limited to a two-mile radius), and amateur radio licenses registered to users.

The Applicant will attempt to identify any underground cables or fiber optic lines within two miles of the Project Area if they are found to exist. The Applicant will consult with Dig Safe New York (DSNY) in an effort to obtain maps of any buried cables within two miles of the Project Area. Prior to construction, the Applicant will submit a “design ticket” to DSNY, which will initiate a process in which utilities and DSNY provide relevant mapping to the Applicant. The Project will avoid any impacts to underground cables or fiber optic lines.

High River Energy Center will consult with the National Telecommunications and Information Administration (NTIA). Any response and/or concerns from NTIA will be included in Exhibit 26 of the Application.

The Complaint Resolution Plan developed for this Project and referenced throughout this PSS, will be available to resolve issues and complaints should they arise within the local community, largely on an individual basis. The Plan will outline the steps for investigation and resolution of such complaints.

### **Proposed Studies**

The Applicant proposes to collect, evaluate and provide the following information to support and prepare Exhibit 26 of the Application in accordance with §1001.26:

- (a) The Applicant will consult with the Montgomery County Office of Emergency Services, Montgomery County Sheriff's Office, and NYS Division of Homeland Security & Emergency Services to assess any effects on communication services, with particular respect to emergency services, or potential impacts on the communication network for the NYS Early Warning Weather Detection System. An identification of all existing broadcast communication sources within a two-mile radius of the Facility and the electric interconnection between the Project and the point of interconnection, unless otherwise noted, including:
  - (1) AM radio.
  - (2) FM radio.
  - (3) Television.
  - (4) Telephone.
  - (5) Microwave transmission (all affected sources, not limited to a two-mile radius).
  - (6) Emergency services.
  - (7) Municipal/school district services.
  - (8) Public utility services.
  - (9) Doppler/weather radar (all affected sources, not limited to a two-mile radius).
  - (10) Air traffic control (all affected sources, not limited to a two-mile radius).
  - (11) Armed forces (all affected sources, not limited to a two-mile radius).
  - (12) Global positioning systems (GPS).
  - (13) LORAN (all affected sources, not limited to a two-mile radius).
  - (14) Amateur radio licenses registered to users.
  
- (b) Based upon publicly available information, the Applicant will identify underground cables or fiber optic major transmission telecommunication lines within two miles of the Facility and the electric interconnection between the Project and point of interconnection. The Project

will avoid any impacts to underground cables or fiber optic lines. The Applicant will contact Montgomery County to confirm identification of any fiber potentially connecting radio towers.

- (c) A statement describing the anticipated effects of the proposed Project and the electric interconnection between the Project and the point of interconnection on the communications systems required to be identified pursuant to subdivision (a) and (b) of this exhibit, including the potential for:
  - (1) Structures to interfere with broadcast patterns by re-radiating the broadcasts in other directions;
  - (2) Structures to block necessary lines-of-sight;
  - (3) Physical disturbance by construction activities. The Applicant will consult with DSNY prior to the commencement of any construction activities.
  - (4) Adverse impacts to co-located lines due to unintended bonding; and
  - (5) Any other potential for interference.
- (d) An evaluation of the design configuration of the proposed Project and electric interconnection between the Project and the point of interconnection demonstrating that there shall be no adverse effects on the communications systems required to be identified pursuant to subdivision (a) and (b) of this exhibit.
- (e) A description of post-construction activities that shall be undertaken to identify and mitigate any adverse effects on the communications systems required to be identified pursuant to subdivision (a) and (b) of this section that occur despite the design configuration of the proposed Project.
- (f) There are no wind power facilities proposed as part of the Project, therefore this section of the Exhibit 26 regulation is not applicable.



### 3.27 Socioeconomic Effects (Exhibit 27)

The High River Energy Center Project construction, operation, and maintenance will be analyzed to determine the socioeconomic effects in the vicinity of the Town of Florida. Economic impacts will be evaluated using the IMPLAN (Impact Analysis for Planning) Model and described in the Article 10 Application, in compliance with Exhibit 27 requirements in Part 1001.27, to determine potential socioeconomic impacts of the Project. The IMPLAN Model will be developed using local multipliers. The potential socioeconomic impacts include:

**A. On-site construction work-force impacts:**

Local construction employment will primarily benefit those in the construction trades, including equipment operators, truck drivers, laborers, and electricians. Estimates of the construction work-force will be provided in Exhibit 27 of the Application and will include a breakdown of the anticipated on-site workforce by discipline for each quarter during the construction period, along with an estimate of the peak construction employment level. These estimates will be prepared based on the Applicant's experience with similar projects and will be customized to the High River Energy Center Project.

**B. Direct effects:**

Direct effects of the project include payroll and other expenditures. Local expenditures within the general area of Montgomery County and the Capital District will occur during the construction phase and are likely to include construction materials such as concrete, gravel, and re-bar. Estimates of direct spending will be developed by the Applicant and will be provided in Exhibit 27 of the Application.

**C. Indirect and induced effects:**

Indirect effects arise from business to business spending, rather through direct spending by High River Energy Center. Induced effects occur as money is recirculated through household spending patterns, generating additional local economic activity. Estimates of indirect and induced effects will be modeled with IMPLAN using local multipliers and will be presented in Exhibit 27 of the Application. IMPLAN will be customized to reflect the direct costs as estimated

by the Applicant. The Applicant will provide as much transparency with regards to the multipliers as possible.

**D. Post-construction direct effects:**

Annual expenditures for direct O&M expenses include parts, supplies, road maintenance, landscape services, fuel, vehicle maintenance, tools, etc. Direct effects associated with O&M activities will be estimated by the Applicant based on the characteristics of the proposed High River Energy Center and the Applicant's experience with similar projects. These estimates will be presented in Exhibit 27 of the Application.

**E. Post-construction secondary employment impacts:**

Secondary (or indirect and induced) economic effects will result from O&M activities. Estimates of indirect and induced effects will be modeled with IMPLAN and will be presented in Exhibit 27 of the Application. IMPLAN will be customized to reflect the direct costs as estimated by the Applicant and will use local multipliers. The Applicant will provide as much transparency with regards to the multipliers as possible.

**F. Construction and operation school district impacts:**

High River Energy Center encourages hiring local employees to fill temporary construction positions, as well as permanent operations jobs, to the extent possible. Further, families do not typically relocate for temporary construction jobs. As a result, there will be few, if any, new students enrolled in the area's schools and no adverse impact to the school districts in the area.

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

High River Energy Center will coordinate with the Town of Florida, Montgomery County utilities and emergency services providers to ensure that public services and health and safety are not negatively impacted by the Project. The Montgomery County Sheriff's office, NY State Police, and local fire and ambulance departments have adequate resources to monitor any vehicular traffic from construction and operations activities on area roads, to address routine medical needs and to address any law enforcement or public safety issues that may occur.

High River Energy Center employees will be trained in fire safety and high voltage. It is anticipated that local fire and ambulance personnel would primarily be attending any injuries or medical situations at ground level.

All solar arrays will be sited with adequate setback from residences, structures, roads, utilities and property lines to ensure that any fire or collapse will not impact the health and safety of area residents. High River Energy Center will continue to coordinate with municipal officials and emergency services providers and provide an update to this information in Exhibit 27 of the Application, including any training needs or equipment deficiencies that may be identified in order to address any contingency plans for emergency response.

The Project will have no need for potable water connection or wastewater connection and therefore will not impact any public infrastructure beyond local roadways, which will be returned to at least pre-existing conditions following the completion of construction if necessary. Similarly, there will be no incremental costs for solid waste disposal, as waste disposal will be limited to small amounts of solid waste (paper, rags, packing cardboard) and will be recycled or disposed of properly by Project work crews in designated receptacles for disposal in properly licensed off-site landfills.

**H. Designated tax jurisdiction, tax and payment impacts:**

The following entities have tax assessment jurisdiction on parcels within the Project Area (see Figure 15 for locational reference):

- Montgomery County
- Town of Florida
- Greater Amsterdam School District
- Florida Volunteer Fire Department

High River Energy Center anticipates that these entities will benefit from taxes on Project components sited within their jurisdictions. The Applicant anticipates entering into a PILOT agreement and/or Host Community Agreement. High River Energy Center will continue to

coordinate with municipal officials and provide an update in Exhibit 27 of the Application based upon publicly available information.

**I. Smart growth public infrastructure compliance impacts:**

New York ECL Article 6, Section 0107 requires that the construction of new or expanded “public infrastructure” meet certain Smart Growth criteria. The Project is a privately funded, merchant energy project and as such is not subject to ECL § 6-0107. Nevertheless, the Application will include a discussion of the Project’s consistency with the criteria, as applicable.

**Proposed Studies**

The Applicant proposes to collect, evaluate and provide the following information to support and prepare Exhibit 27 of the Application in accordance with §1001.27:

- (a) An estimate of the average construction work force, by discipline, for each quarter, during the period of construction; and an estimate of the peak construction employment level.
- (b) An estimate of the annual construction payroll, by trade, for each year of construction and an estimate of annual direct non-payroll expenditures likely to be made in the Town of Florida (materials, services, rentals, and similar categories) during the period of construction.
- (c) An estimate of the annual secondary employment and economic activity likely to be generated in the vicinity of the Project by the construction of the plant. These estimates will be further refined and detailed in Exhibit 27 of the Application, with as much transparency as available, and will provide the basis of any economic multiplier factor or other assumptions used in the analysis.
- (d) An estimate of the number of jobs and the on-site payroll, by discipline, during a typical year once the plant is in operation, and an estimate of other expenditures likely to be made in the vicinity of the Project during a typical year of operation.

- (e) An estimate of the annual secondary employment and economic activity likely to be generated in the vicinity of the Project by its operation. These estimates may be developed using a job impact model. These estimates will be further refined and detailed in Exhibit 27 of the Application and any multiplier employed will be identified with as much transparency as available.
- (f) An estimate of incremental school district operating and infrastructure costs due to the construction and operation of the Project, this estimate to be made after consultation with the affected school district.
- (g) An estimate of incremental municipal, public authority, or utility operating and infrastructure costs that will be incurred for police, fire, emergency, water, sewer, solid waste disposal, highway maintenance and other municipal, public authority, or utility services during the construction and operation phases of the Project (this estimate to be made after consultation with the affected municipalities, public authorities, and utilities).
- (h) A list of jurisdictions that are anticipated to have economic benefits due to the Project and an identification of all jurisdictions (including benefit assessment districts and user fee jurisdictions) that levy real property taxes or benefit assessments or user fees upon the Facility site, its improvements and appurtenances and any entity from which payments in lieu of taxes will or may be negotiated.
- (i) For each jurisdiction, an estimate of the incremental amount of annual taxes (and payments in lieu of taxes [PILOT], benefit charges and user charges) projected to be levied against the post-construction Project, its improvements and appurtenances.
- (j) For each jurisdiction, a comparison of the fiscal costs to the jurisdiction that are expected to result from the construction and operation of the Facility to the expected tax revenues (and payments in lieu of taxes, benefit charge revenues and user charge revenues) generated by the Project.
- (k) An analysis of whether all contingency plans to be implemented in response to the occurrence of a fire emergency or a hazardous substance incident can be fulfilled by existing

local emergency response capacity, and in that regard identifying any specific equipment or training deficiencies in local emergency response capacity (this analysis to be made after consultation with the affected local emergency response organizations).

- (l) Although not required by ECL 6-0107, Exhibit 27 of the Application will present a detailed statement of how the proposed Project and interconnections are consistent with each of the applicable state smart growth public infrastructure criteria specified in ECL § 6-0107, or why consistency would be impracticable.

### 3.28 Environmental Justice (Exhibit 28)

Potential Environmental Justice Areas are defined by New York 6 NYCRR-NY §487.3 as areas with populations that meet one or more of the following thresholds:

- 51.1% or more of the population in an urban area reported themselves to be members of minority groups; or
- 33.8% or more of the population in a rural area reported themselves to be members of minority groups;<sup>2</sup> or
- 23.59% or more of the population in an urban or rural area had household incomes below the federal poverty level.

The Project Area, including a half-mile buffer around the proposed Facility site, is wholly contained within Census Block Group 1, Census Tract 728 in Montgomery County, New York. According to the most current data from the U.S. Census Bureau's American Community Survey<sup>3</sup>, the block group has a low-income population of 17.2 percent and a minority (non-white, non-Hispanic) population of 5.6 percent. Based on the review of the minority and low-income population of the Census Block Group, the proposed location is not in a Potential Environmental Justice Area, as defined by the State of New York.

Exhibit 28 requires the Applicant to provide sufficient information for an assessment of the potential impact of the Facility on Environmental Justice communities. The intent of an Environmental Justice evaluation is to determine if air quality and associated health impacts are disproportionately affecting certain communities or populations. To guide such an evaluation, NYSDEC promulgated Commissioner Policy 29 (CP-29), entitled Environmental Justice and Permitting. CP-29 has limited applicability, applying only to applications for major projects and major modifications for permits relating to water pollution, air pollution, solid and hazardous waste management, and siting of industrial hazardous waste facilities. The Project will not require any such permits. Accordingly, CP-29 is not applicable to the Project. The Project will have no air emissions during operation, and, accordingly, CP-29 and

---

<sup>2</sup> *Minority population* means a population that is identified or recognized by the U.S. Census Bureau as Hispanic, African-American or Black, Asian and Pacific Islander, or American Indian.

<sup>3</sup> Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

NYSDEC regulations do not apply and the Environmental Justice Analysis outlined in 6 NYCRR §487.6 is not required and will not be provided in the Article 10 Application.

To date High River Energy Center has received no comments concerning Environmental Justice.

### **Proposed Studies**

The Applicant proposes to collect, evaluate and provide the following information to support and prepare Exhibit 28 of the Application in accordance with §1001.28:

- (a) A statement that because: (a) the proposed project impact area is not in a Potential Environmental Justice Area, as defined by 6 NYCRR §487.6; (b) there will be no air emissions during operation; and (c) any vehicle/equipment emissions during construction will not affect the EJ area due to distance, the Project will not negatively impact this or any other Environmental Justice areas. Therefore, the Environmental Justice Analysis provided by 6 NYCRR § 487.6 is not required.



### 3.29 Site Restoration and Decommissioning (Exhibit 29)

At the end of the useful economic life of the Project, the Project will either continue operations, be repowered, or be decommissioned. In the event that the Project permanently ceases operations, the Decommissioning Plan will be implemented to remove and recycle, to the maximum extent practicable, equipment and related materials in order to essentially return the Project Area to its pre-construction condition available for agriculture and other open space usage as determined by each landowner.

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

In general, the decommissioning of the Project will begin with the disconnection of the collection cables from each solar array. Collection cables will be removed and recycled, while any underground sections will be abandoned in place in order to mitigate environmental impacts or may be pulled up and recycled, as will be determined in consultation with the landowner and in accordance with such requirements as may be applicable as determined by the Siting Board. Collection cable support towers/poles will be removed and recycled.

Each solar array would then be deconstructed with the removal of panels, supports, and posts in that order. Security fencing will be removed and recycled and/or disposed of. Access roads will be left in place for the use of the landowners, or removed at landowner discretion if they do not intend to make use of the access roads. Disturbed areas will be regraded, topsoiled, and seeded to the extent necessary. It is anticipated that the decommissioning of the Project would take up to a year to complete (more if any permitting is required).

If conditions permit, after the useful life of the Project, the Applicant may "repower" the Project, if circumstances permit. When a location with good solar resources and sufficient transmission capacity

is found, combined with landowners and a community willing to host a solar energy project, the Applicant may want to stay in that area and produce solar energy as long as is possible. Regardless, the Applicant will be prepared to decommission the Project and fulfill its obligations when the time comes.

High River Energy Center is contractually obligated with the landowners to remove improvements, including solar arrays, foundations, and other facilities to a depth of at least three feet below the surface and restore the property to substantially the same condition that existed immediately prior to construction. In addition to the contractual obligations, plan funding will be described consistent with the requirements of 16 NYCRR 1001.29. The details of the decommissioning plan will be provided in Exhibit 29 of the Application.

#### **Proposed Studies**

The Applicant proposes to collect, evaluate and provide the following information to support and prepare Exhibit 29 of the Application in accordance with §1001.29:

- (a) A statement of the performance criteria proposed for site restoration in the event the Project cannot be completed and for decommissioning of the Project, including a discussion of why the performance criteria are appropriate. Among other things, the statement shall address:
  - (1) Safety and the removal of hazardous conditions;
  - (2) Environmental impacts;
  - (3) Aesthetics;
  - (4) Salvage and recycling;
  - (5) Potential future uses for the site; and
  - (6) The useful life of the Project.
- (b) A plan for the decommissioning and restoration of the Project Area including how such decommissioning and restoration shall be funded and a schedule with defined period of time for determining when the conduct of decommissioning and site restoration activities.

- (c) There are no wind power facilities proposed as part of the Project, therefore this section of the Exhibit 29 regulation is not applicable.
- (d) No nuclear power facilities are proposed as part of the Project, therefore this section of the Exhibit 29 regulation is not applicable.

### 3.30 Nuclear Facilities (Exhibit 30)

There are no nuclear facilities included in the proposed Project. Therefore, this requirement is not applicable to the High River Energy Center.

### 3.31 Local Laws and Ordinances (Exhibit 31)

The High River Energy Center will be located in the Town of Florida, Montgomery County, New York. The Applicant will consult with the Town during the Application process to identify the substantive provisions of applicable laws and ordinances that should be addressed in the Application. In October 2018, the Town of Florida enacted a temporary six (6) month moratorium on construction of solar energy systems and equipment and solar energy facilities. As stated within the moratorium issued by the Town, its purpose is to offer the Town Board *“the opportunity to adequately study and consider and regulate and control land use while protecting the health, safety and welfare of its residents, through the zoning and regulation of location and placement of Solar Energy Systems and Equipment and Solar Energy Facilities. These regulations will encourage and foster the development of alternative energy within the Town while protecting the natural and scenic resources of the area through proper regulation of land use in the placement of such facilities and systems.”*

The Town Board has been tasked with addressing the establishment, placement, construction, enlargement and erection of Solar Energy Facilities and Systems on a comprehensive Town-wide basis, and to adopt a more comprehensive zoning ordinance to regulate same. The Applicant will cooperate with both the Town Board during this process and is available to discuss the moratorium with the Town Board throughout the review of their current zoning regulations applicable to solar facilities. The procedural and substantive requirements described below are based upon the Town’s current Zoning Ordinance effective January 20, 2014 (last amended May 23, 2016).

#### **A. Local Procedural Requirements**

Below is a preliminary list of local laws and ordinances of a procedural nature that may be applicable to the construction and operation of the High River Energy Center Project in the absence of Article 10:

*Town of Florida – Article VIII Supplementary Regulations, Section 45.5 Solar Energy Systems and Equipment (Utility-Scale Solar Collector System):*

- *§ C 1 Site Plan.* All utility-scale solar collector systems shall provide a site plan in accordance with Article VII of this Zoning chapter.
- *§ C 2 Signage.* All signage shall be provided as part of site plan review.

- *§ C 3 (b) Visual.* A visual environmental assessment form (Visual EAF), landscaping plan and visual assessment report, including appropriate modeling and photography assessing the visibility from key viewpoints identified in the Visual EAF, existing tree lines, surrounding topography, and proposed elevations shall be required.
- *§ C 4 Lighting.* A lighting plan shall be required.
- *§ C 5 Utilities.* The applicant shall provide written confirmation that the electric grid has the capacity to support the energy generated from the utility-solar collector system.
- *§ C 6 Access.* The applicant shall indicate on a site plan all existing and proposed access to the site, including road, electric power, emergency access, land-based telephone line connection, and other utilities existing and proposed within the property boundaries of the proposed location.
- *§ C 8 Ownership.* In the case of an application for a utility-scale solar collector system to be located on private lands owned by a party other than the applicant or the Town, a copy of the lease agreement with the property owner shall be filed with the Town.
- *§ C 9 Proof of Insurance.* The applicant and the owner of the property where the utility-scale solar collector system is to be located shall file with the Town proof of insurance.
- *§ C 12 Inspections.* Documentation from the utility company, verifying that the utility-scale solar collector system is active, shall be provided annually to the Town of Florida Building Inspector.
- *§ D (a) Performance bond and other security.* Prior to the issuance of a building permit, a performance bond or other security sufficient to cover the full cost of the removal and disposal of the utility-scale solar collector system and any associated accessory structures upon abandonment of said facility shall be provided by the owner/operator. This cost shall be determined by an estimate of the Town Building Inspector. Any such security must be provided pursuant to a written security agreement with the Town, approved by the Town Board and also approved by the Town Attorney as to form, sufficiency and manner of execution. The form of security shall be limited to those permissible under NYS Town Law. If the owner of the site fails to comply with any conditions of the approval during construction or as part of the long-term maintenance of the site, all costs of the Town incurred to comply with conditions of the approval shall be paid using the surety provided by the applicant. Failure to comply

with the conditions of the approval or to maintain an acceptable level of surety will result in revocation of the certificate of occupancy.

- *§ E Building permit fees for solar panels.* The fees for all building permits required pursuant to this Local Law shall be paid at the time each building permit application is submitted in such reasonable amount as the Town Board may by resolution establish and amend from time to time.

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

Except with respect to the New York State Uniform Fire Prevention and Building Code, as explained below, High River Energy Center does not request the Board to authorize a municipality to implement any local procedural requirements.

**B. Local Substantive Requirements**

As discussed in the introductory paragraph of Section 3.31, the Town of Florida enacted a temporary six (6) month moratorium on construction of solar energy systems and equipment and solar energy facilities. The Applicant will cooperate with the Town Board during this process and is available to discuss the moratorium with the Town Board throughout their review of their current zoning regulations applicable to solar facilities. The procedural and substantive requirements described below are based upon the Town's current Zoning Ordinance effective January 20, 2014 (last amended May 23, 2016). At this time, the Applicant has determined that none of the local substantive requirements of the effective zoning regulations are unreasonably burdensome in terms of existing technology, cost/economics, or consumer needs.

Below is a preliminary list of the local laws and ordinances of a substantive nature that may be applicable to the construction and operation of the High River Energy Center Project.

*Town of Florida – Article VIII Supplementary Regulations, Section 45.5 Solar Energy Systems and Equipment (Utility-Scale Solar Collector System):*

- *§ A 2 Applicability.* In any instances where specific permitted uses, area, or height standards, development guidelines and/or review procedures specifically set forth in

this section conflict with any other general provision or requirements of the Zoning chapter, the particular provisions set forth herein shall take precedence and control. In all instances not specifically addressed in this section or in Article VI of this chapter, the Zoning chapter shall apply.

- *§ B 1 Height.* (a) All solar collectors shall have a maximum height of 20 feet from grounds elevation. (b) All buildings and accessory structures associated with the utility-scale solar collector system shall have a maximum height of 35 feet, excluding the solar collector.
- *§ B 2 Setback.* All utility-scale solar collector systems and associated buildings, accessory structures and equipment shall have a minimum setback from any property line of 200 feet.
- *§ B 3 Lot Coverage.* (a) Impervious surface lot coverage – All utility-scale solar collector systems and associated accessory structures and equipment shall utilize a maximum of 20% impervious lot coverage. (b) Pervious surface lot coverage – All utility-scale solar collector systems and associated accessory structures and equipment shall utilize a minimum of 80% permeable lot coverage. (c) Tree removal shall be minimized and replanting should be considered on parcels where a large amount of trees are being removed in order to place solar arrays.
- *§ C 2 Signage.* All signage shall be in accordance with Article VIII of this Zoning Chapter.*§ C 3 Visual.* (a) Utility-scale solar collector systems shall be sited in a manner to have the least possible practical visual effect on the environment. (c) Landscape screening and/or earth berming shall be provided to minimize the potential visual impacts associated with the utility-scale solar collector systems and its accessory buildings, structures and/or equipment. (d) The associated structure shall be screened, placed underground, depressed, earth-bermed or sited below the ridgeline to the greatest extent feasible, particularly in areas of high visibility.
- *§ C 4 Lighting.* No utility-scale solar collector system shall be artificially lighted unless otherwise required by a federal, state or local authority. Exterior lighting may be provided for associated accessory structures and access entrances as may be determined appropriate for security purposes only.
- *§ C 5 Utilities.* The applicant shall provide written confirmation that the electric grid has the capacity to support the energy generated from the utility-solar collector



system. Electrical and land-based telephone utilities extended to serve the site shall be underground.

- *§ C 6 Access.* Existing roadways shall be used for access to the site whenever possible.
- *§ C 7 Glare and heat.* No direct or unreasonable glare or transmission of heat shall be produced that is perceptible beyond the boundaries of the lot on which such use is situated.
- *§ C 10 Security provisions.* Each site shall have a minimum of an eight-foot security fence to prevent unauthorized access and vandalism to the utility-scale solar collectors and a security program for the site as approved by the Planning Board during site plan review.
- *§ C 11 Noise.* Noise-producing equipment shall be sited and/or insulated to minimize noise impacts on adjacent properties as approved by the Planning Board during site plan review.
- *§ C 13 Decommissioning.* (a) Solar farms and solar power plants which have not been in active and continuous service for a period of 12 consecutive months shall be removed at the owners or operators expense. (b) The site shall be restored to as natural a condition as possible within 6 months of removal.
- *§ D Removal of obsolete/unused facilities.*
  - *(b) Removal.* The utility-scale solar collector system, including any accessory structures and/or equipment, shall be dismantled and removed from the site when the utility-scale solar collector system has been inoperative or abandoned for 12 consecutive months. As a condition of the certificate of compliance, applicants shall post a surety in an amount and form acceptable to the Town for the purposes of removal or abandonment. The amount shall be determined by an estimate of the Town Building Inspector. Acceptable forms shall include, in order of preference: cash; letter of credit; or a bond that cannot expire; or a combination thereof. Such surety will be used to guarantee removal of the utility-scale solar collector system should the system be abandoned. Abandonment shall be assumed by the Town if the annual documentation as required in Utility scale solar collector system section (12) is not provided by the owner, applicant or lessee for one year to the Town of Florida Building Inspector. The Town Building Inspector shall then provide

written notice to the owner to remove the utility-scale solar collector system, and the owner shall have three months from written notice to remove the utility-scale solar collector system, including any associated accessory structures and/or equipment, and restore the site to a condition approved by the Planning Board. If the owner, applicant or lessee fails to remove any associated structures or restore the site to the condition approved by the Planning Board, all costs of the Town incurred to comply with this condition shall be paid using the surety provided by the applicant.

At this time the Applicant has determined that none of the local substantive requirements are unreasonably burdensome in terms of existing technology, cost/economics, or consumer needs. Therefore, the Applicant is not currently requesting that the Board refuse to apply any of the substantive requirements of the local ordinances. If, at any time, the Applicant determines that it cannot comply with any of the substantive requirements identified above, the Applicant will list those substantive requirements in the Application with a request that the Siting Board not apply such law(s) and will include a statement justifying those requests.

### **C. Zoning Designation**

The Town of Florida has adopted zoning regulations (last amended May 23, 2016). The following provides a summary of the substantive provisions of zoning regulations that may be applicable to the Project. As the Town has adopted a solar ordinance as detailed above, any zoning regulations that conflict with the solar ordinance are supplanted.

#### *Town of Florida – Article V Use Regulations*

##### *Section 9 A-Agricultural District:*

The Project Area is wholly located within the A-Agricultural District. Principal permitted uses within the zone include the following:

- Farm and accessory buildings and uses
- Picnic grove, fish or game club (private)
- Nursery
- One family dwelling
- Community Park or Playground

- Home occupation
- Mobile home as part of a farm operation
- Accessory use and building

Uses permitted as a special permit by the Planning Board include the following:

- Commercial recreation
- Bed and breakfast establishment
- Golf course or country club
- Nursing, convalescent or home for the aged
- Personal wireless service facility
- Public utility facility
- Farm products plant
- Radio, TV transmitter or receiving tower with building
- Radio, TV transmitter or receiving tower without building
- Boarding or rooming house
- Church
- Parish house or convent
- Animal/veterinary hospital
- Public or parochial school or college
- Two family dwelling
- Adult oriented business

As listed above, a public utility facility, such as the Project, is an allowable special permit use within the A-Agricultural District.

*Town of Florida – Article VI – Area and Height Regulations, Lots, Yard and Buildings*

*Section 14 Regulations in Schedule A*

Schedule A contains the Town’s dimensional regulations for the A-Agricultural District as listed below in Table 4:

**Table 4. Town of Florida Zoning Ordinance – Schedule A Dimensional Regulations for Public Utility Facility Without Building in the A-Agricultural District**

Dimensional Regulation	Requirement
Minimum Lot Size	10,000 square feet 100 linear feet
Maximum Lot Coverage	20%

Dimensional Regulation	Requirement
Minimum Living Area	N/A
Building Height	N/A
Minimum Front Yard	25 feet
Minimum Side Yard	25 feet (one) 50 feet (both)
Minimum Rear Yard	50 feet

As indicated in Article VIII Supplementary Regulations, Section 45.5 Solar Energy Systems and Equipment of the Town’s zoning ordinance, any instances where specific permitted uses, area, or height standards, development guidelines and/or review procedures specifically set forth in the Town’s solar ordinance conflict with any other general provision or requirements of the zoning chapter, the particular provisions of the solar ordinance take precedence and control. Accordingly, the dimensional regulations of the Town’s solar ordinance supersede those listed in Table 4 above.

*Town of Florida – Article VIII – Supplementary Regulations Section 37 – Landscaping Requirements*

A. Where any permitted non-residential land use, multiple-family development or mobile home park abuts an existing residential parcel or vacant parcel where residential development could occur, a strip of land at least 20 feet wide shall be maintained as a landscaped area in the front, side and/or rear yard which adjoin these uses.

B. Required landscaping shall be installed and maintained in a healthy growing condition and shall take the form of any or all of the following: shade trees, deciduous shrubs, evergreens, well-kept grassed areas or ground cover. In any case, all such landscaping shall be a minimum of four (4) feet in height.

The Applicant intends to provide landscaping in accordance with the Town’s Solar Ordinance’s substantive requirements.

### **Proposed Studies**

The Applicant proposes to collect, evaluate and provide the following information to support and prepare Exhibit 31 of the Application in accordance with §1001.31:

- (a) A list and copies, in electronic form, of all local ordinances, laws, resolutions, regulations, standards and other requirements applicable to the construction and operation of the Project that are of a procedural nature for those towns within the Project Area. These local procedural requirements are supplanted by PSL Article 10 unless the Board expressly authorizes the exercise of the procedural requirement by the local municipality or agency.
- (b) A list and copies, in electronic form, of all local procedural requirements required to be identified pursuant to section (a) of this exhibit for which the Applicant requests that the Board expressly authorize the exercise of the procedural requirement by the local municipality or agency, including a statement why such local exercise would be desirable or appropriate.
- (c) Identification of the local agency qualified by the Secretary of State that shall review and approve the building plans, inspect the construction work, and certify compliance with the New York State Uniform Fire Prevention and Building Code, the Energy Conservation Construction Code of New York State, and the substantive provisions of any applicable local electrical, plumbing or building code. The Town of Florida has adopted and incorporated the New York State Uniform Fire Prevention and Building Code for administration into its local electric, plumbing and building codes, therefore the Applicant may make a request pursuant to subdivision (b) of this section that the Board expressly authorize the exercise of the electric, plumbing and building permit application, inspection and certification processes by the Town of Florida.
- (d) Identification and copies, in electronic form, of all local ordinances, laws, resolutions, regulations, standards and other requirements applicable to the construction and operation of the Project that are of a substantive nature, together with a statement that the location of the Facility as proposed conforms to all such local substantive requirements, except any

that the applicant requests that the Board elect to not apply. Copies of zoning, flood plain and similar maps, tables and/or documents shall be included in the exhibit when such are referenced in such local substantive requirements. Pursuant to PSL §168(3) (e), the Board must find that the Facility is designed to operate in compliance with these local substantive requirements, all of which shall be binding upon the applicant, unless the Board elects to not apply them by finding that, as applied to the proposed Project such are unreasonably burdensome in view of the existing technology or the needs of or costs to ratepayers whether located inside or outside of such municipality.

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

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

- (i) A summary table of all local substantive requirements required to be identified pursuant to subdivisions (d) and (g) of this exhibit in two columns listing the provisions in the first column and a discussion or other showing demonstrating the degree of compliance with the substantive provision in the second column.
  
- (j) An identification of the zoning designation or classification of all lands constituting the site of the proposed Project and a statement of the language in the zoning ordinance or local law by which it is indicated that the proposed Project is a permitted use at the proposed site. If the language of the zoning ordinance or local law indicates that the proposed Project is a permitted use at the proposed site subject to the grant of a special exception, a statement of the criteria in the zoning ordinance or local law by which qualification for such a special exception is to be determined.



### 3.32 State Laws and Regulations (Exhibit 32)

The Applicant has compiled a list of permits, and other authorizations required by state agencies to approve the construction of the Project (see Table 5 below). Throughout the duration of the Article 10 preparation process, the Applicant will coordinate with agencies listed in Table 5 and provide an updated table upon submission of the Application. Table 5 indicates each permit or other authorization and the associated regulatory agency, requirements, preliminary studies and Application requirements, and an estimated agency review time.

**Table 5. State Reviews, Permits and Approvals**

Permit/ Clearance	Regulatory Agency <sup>1</sup>	When Required	Potential Studies & Application Requirements	Status and Estimated Approval Times
Article 10 Siting Certificate	Siting Board	Construction and operation of major electric generating facilities pursuant to Article 10 of the Public Service Law	Article 10 Application to be prepared in accordance with 16 NYCRR Chapter X (Certification of Major Electric Generating Facilities)	Final Public Involvement Program Plan (PIP Plan) filed in November 2017.
Certificate of Public Convenience and Necessity (PSL §68)	New York State Public Service Commission	Projects greater than 80 MW	Permission required per regulatory requirements as interpreted by Siting Board in Cassadaga decision.	Concurrent with Article 10 Application review and approval.
Stormwater Permit (SPDES GP-0-15-002)	NYSDEC	Soil disturbance of one (1) or more acre	Preparation of a SWPPP	Authorization under this General Permit is coordinated as part of the Article 10 process.
Water Quality Certification (Section 401 of CWA)	Siting Board	Projects whose effluent discharges could affect waters of the U.S.	Analyses for this Application are ongoing	Issuance will be coordinated as part of the Article 10 process.

Permit/ Clearance	Regulatory Agency <sup>1</sup>	When Required	Potential Studies & Application Requirements	Status and Estimated Approval Times
Historic Preservation Act (Section 14.09)	SHPO	Project must go through review/consultation to determine whether it will affect historic or culturally significant properties.	Phase I Assessment may be required.	Project has been preliminarily reviewed on SHPO CRIS.
Agricultural and Markets Law – Article 25-AA	NYSDAM	Consultation required as Project is located within certified Agricultural Districts	Review of Agricultural District Mapping & Coordination with NYSDAM	Consult with NYSDAM for recommendations on how to minimize impacts to agricultural operations as part of the Project. Consultation will be incorporated into Article 10 process.
Interconnection Studies	NYISO	Interconnection Required	Feasibility study and system reliability impact study underway.	Interconnection request submitted 3/24/2017

### Compliance with State Requirements

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

### Proposed Studies

Exhibit 32 of the Board's regulation provide that before preparing the exhibit required by this section, the Applicant shall consult with the state agencies and authorities whose requirements are the subject of the exhibit to determine whether the Applicant has correctly identified all such requirements.

The Applicant proposes to collect, evaluate and provide the following information to support and prepare Exhibit 32 of the Application in accordance with §1001.32:

- (a) A list of all state approvals, consents, permits, certificates, or other conditions for the construction or operation of the proposed Project (including interconnection electric

transmission lines and fuel gas transmission lines that are not subject to review under Article VII of the PSL) of a procedural nature. These state procedural requirements are supplanted by PSL Article 10, except for permits to be issued by the NYSDEC pursuant to Federal recognition of State authority, or pursuant to federally delegated or approved authority, in accordance with the Clean Water Act, the Clean Air Act and the Resource Conservation and Recovery Act, and permits pursuant to Section 15-1503, Title 9 of Article 27, and Articles 17 and 19 of the ECL, unless the Siting Board expressly authorizes the exercise of such authority by the state agency. In addition to the Article 10 Application, the Applicant will apply to the Public Service Commission for a Certificate of Public Convenience and Necessity Pursuant to Section 68 of the PSL authorizing the exercise of municipal rights to occupy municipal property and for other authorization as clarified by the Siting Board in its Cassadaga decision issuing the certificate.

- (b) A list of all state procedural requirements required to be identified pursuant to subdivision (a) of this section for which the Applicant requests that the Board expressly authorize the exercise of such authority by the state agency, including a statement why such exercise would be desirable or appropriate.
- (c) A list of all state approvals, consents, permits, certificates, or other conditions for the construction or operation of the proposed Project (including interconnection electric transmission lines and fuel gas transmission lines that are not subject to review under Article VII of the PSL) of a substantive nature, together with a statement that the Facility as proposed conforms to all such state substantive requirements. Pursuant to PSL §168(3) (e), the Board must find that the Facility is designed to operate in compliance with these state substantive requirements, all of which shall be binding upon the applicant.
- (d) A summary table of all state substantive requirements required to be identified pursuant to subdivision (c) of this section in two columns listing the provisions in the first column and a discussion or other showing demonstrating the degree of compliance with the substantive provision in the second column.

- (e) A list of all state approvals, consents, permits, certificates, or other conditions for the construction or operation of any proposed offsite interconnections and ancillary features, that are not encompassed within the definition of Major Electric Generating Facility. These state actions not for the construction or operation of the proposed Project are not supplanted by PSL Article 10 and may be state procedural requirements or state substantive requirements.

### 3.33 Other Applications and Filings (Exhibit 33)

The Applicant does not have any pending application or filing with the Siting Board or with any other governmental department, agency or court of competent jurisdiction (state or federal) concerning the development of the Project.

#### **Federal Involvement**

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

##### United States Fish and Wildlife Service:

- Endangered Species Act, Section 7 Consultation

##### United States Army Corps of Engineers:

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

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

#### **Proposed Studies**

The Applicant proposes to collect, evaluate and provide the following information to support and prepare Exhibit 33 of the Application in accordance with §1001.33:

- (a) A statement whether the Applicant has pending, or knows of others who have pending, with the PSC or with any other governmental department, agency or court of competent jurisdiction (State or federal), any application or filing which concerns the subject matter of the proceeding before the Siting Board. If any such applications or filings are pending, the Applicant shall state, for each application or filing, whether the granting of any such application or filing will have any effect on the grant or denial of a Certificate, and whether the grant or denial of a Certificate will have any effect upon the grant or denial of any such

other application or filing. The Applicant shall notify the Secretary, presiding examiner and each party or any significant change in the status of each such application or filing.

- (b) An identification of any federal permits, consents, approvals, or license that will be required for the construction or operation of the Project. The Application shall specify the date on which an application for any such approval was made or the estimated date on which it will be made. The Applicant shall notify the Secretary, presiding examiner and each party of any significant change in the status of each such application.

### 3.34 Electric Interconnection (Exhibit 34)

Interconnection to the electric transmission system will be achieved by using conventional, state of the art technology. Solar panels will generate power at a low voltage, which will be converted from DC to AC at the inverters. Medium voltage will be collected with a system comprised of underground cables and possibly overhead collection lines that will transmit power to a proposed, on-site collection substation. The collection substation will then transform the power up to 115 kV and deliver the power to the adjacent, proposed POI switchyard, to be constructed as part of the Project. The POI switchyard will be constructed by the Applicant and then transferred to National Grid to own, maintain, and operate. The Applicant has requested interconnection of the Project to the New York electric transmission system by connecting to National Grid's Stoner – Rotterdam #12 115 kV circuit.

Under queue request Q618, the NYISO is currently studying the interconnection of 90 MW to the adjacent National Grid transmission infrastructure. The POI switchyard connects the proposed Project to the adjacent National Grid transmission line. Although underground cabling is the preferred option for the electrical collection system, overhead cables may be used where requested by landowners or where underground installation is prohibited or infeasible due to natural constraints such as streams or creek crossings, steep topography, bedrock etc.

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

#### **Proposed Studies**

The Applicant proposes to collect, evaluate and provide the following information to support and prepare Exhibit 34 of the Application in accordance with §1001.34:

- (a) The design voltage and voltage of initial operation.
- (b) The type, size, number and materials of conductors.

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



### 3.35 Electric and Magnetic Fields (Exhibit 35)

Minimal electric and magnetic fields (EMF) are generated by the operation of solar facility components such as the electrical collection lines, and transformers. EMF strength decreases with the square of the distance from the source (the electric charges or currents) for power lines and the cube of the distance from point sources such as substations. The location of electrical collection cables and the location of the collection substation transformers and other electrical equipment inside a restricted area will provide separation of these components from the general public. As a result, EMF levels from Project components are expected to be limited or non-existent.

#### **EMF Study**

The New York State PSC has issued EMF standards that describe measurement methods for compliance. The Applicant will utilize these standards to guide the EMF study that will be included in the Application.

As mentioned above, the Applicant anticipates its electrical interconnection line will be located at a sufficient distance from existing structures so that any EMF levels that may be produced are well below the Commission guidelines.

#### **Proposed Studies**

If required, the Applicant proposes to collect, evaluate and provide the following information to support and prepare Exhibit 35 of the Application in accordance with §1001.35:

- (a) For the right-of-way (ROW) of the proposed connecting transmission line from the collection substation to the POI providing the electrical interconnection between the proposed Project and the existing electric transmission and distribution system, identify, if applicable, every ROW segment having unique EMF characteristics due to structure types and average heights, corridor widths, and co-location of other transmission facilities in the ROW, if any.
- (b) For each if any, identified onsite transmission ROW segment, provide both “base case” and “proposed” cross-sections to scale showing:

- (1) All overhead electric transmission, sub-transmission and distribution facilities, including the proposed Project showing structural details and dimensions and identifying phase spacing, phasing, and any other characteristics affecting EMF calculations.
  - (2) All underground electric transmission, sub-transmission and distribution facilities.
  - (3) All underground gas transmission facilities.
  - (4) All right-of-way boundaries.
  - (5) Structural details and dimensions for all structures (dimensions, phase spacing, phasing, and similar categories) and include a Station number identifying the location.
- (c) A set of the aerial photos/drawings enhanced by showing the exact location of each:
- (1) Onsite transmission corridor segment.
  - (2) Cross-section.
  - (3) Nearest residence or occupied non-residential building in each identified ROW segment with a stated measurement of the distance between the edge of ROW and the nearest edge of the residence or building.
- (d) An EMF study, if required, with calculation tables and field strength graphs for each identified segment cross-section, as follows:
- (1) Signed and stamped/sealed by a licensed professional engineer registered and in good standing in the State of New York.
  - (2) Identification of the specific computer software program used to model the facilities and make the calculations.
  - (3) Regarding the electric fields, modeling of the circuits at rated voltage and electric field calculation tables and field strength graphs calculated at one meter above ground level with 5-foot measurement intervals depicting the width of the entire right-of-way and out to 500 feet from the edge of the right-of-way on both sides including digital copies of all input assumptions and outputs for the calculations.
  - (4) Regarding magnetic fields, modeling of the circuit phase currents equal to the summer- normal, summer short term emergency (STE Sum), winter-normal, and

winter short term emergency (STE Win), loading conditions and magnetic field calculation tables and field strength graphs calculated at one meter above ground level with 5-foot measurement intervals depicting the width of the entire right-of-way and out to 500 feet from the edge of the right-of-way on both sides including digital copies of all input assumptions and outputs for the calculations.

- (5) Regarding the magnetic fields, modeling of the circuit phase currents equal to the maximum average annual load estimated to be occurring on the power lines within ten years after the proposed Project is put in operation and magnetic field calculation tables and field strength graphs calculated at one meter above ground level with 5-foot measurement intervals depicting the width of the entire right-of-way and out to 500 feet from the edge of the right-of-way on both sides, including digital copies of all input assumptions and outputs for the calculation.
- (6) Regarding the magnetic fields, modeling of a “base case” with the circuit phase currents equal to the maximum average annual load currently estimated to be occurring on the existing power lines within the right-of-way (without construction or operation of the proposed Project) and magnetic field calculation tables and field strength graphs calculated at one meter above ground level with 5-foot measurement intervals depicting the width of the entire right-of-way and out to 500 feet from the edge of the right-of-way on both sides, including digital copies of all input assumptions and outputs for the calculations.

### 3.36 Gas Interconnection (Exhibit 36)

This requirement is not applicable to the High River Energy Center, as there is no gas interconnection included in the proposed Project.

### 3.37 Back-up Fuel (Exhibit 37)

This requirement is not applicable to the High River Energy Center, as there is no back-up fuel required for the proposed Project.

### 3.38 Water Interconnection (Exhibit 38)

This requirement is not applicable to the High River Energy Center, as there is no public water supply interconnection required for the operation of the proposed Project.

### 3.39 Wastewater Interconnection (Exhibit 39)

This requirement is not applicable to the High River Energy Center, as there is no municipal wastewater interconnection required for the operation of the proposed Project.

### 3.40 Telecommunications Interconnection (Exhibit 40)

The Project will require telecommunication services to support remote monitoring services. Exhibit 40 of the Application will describe the required bandwidth for this purpose, where physical connection would need to occur, what data networks and service providers are able to provide this service, the physical labor that would be required to provide this service, and the status of discussions and negotiations with service providers, if necessary.

High River Energy Center anticipates that National Grid will use a fiber system to communicate with and monitor the POI switchyard. As part of developing the Application, High River Energy will consult with National Grid on its communication requirements. The results and data collected as a result of this coordination with National Grid will also be included in Exhibit 40 of the Application.

#### **Proposed Studies**

The Applicant proposes to collect, evaluate and provide the following information to support and prepare Exhibit 40 of the Application in accordance with §1001.40:

- (a) A detailed description of the proposed telecommunications interconnection, including all interconnecting facilities, line route, design details, size, functions, and operating characteristics.
- (b) An analysis demonstrating that there will be sufficient capacity to support the requirements of the Project.
- (c) A description of the status of negotiations, or a copy of agreements that have been executed, with companies or individuals for providing the communications interconnection including any restrictions or conditions of approval placed on the Facility imposed by the provider, and a description of how the interconnection and any necessary system upgrades will be installed, owned, maintained and funded.



### 3.41 Applications to Modify or Build-Adjacent (Exhibit 41)

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

## 4.0 Summary and Conclusions

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

The Project Area addressed in this PSS is comprised of locations being evaluated for placement of Project facilities. As shown in Figure 1, the Project Area is comprised of approximately 1,220 acres of land located in the Town of Florida, Montgomery County, New York. The Project will have a generating capacity of 90 MW of power located on leased and/or purchased land from owners of private property. Within the Project Area, it is anticipated that the proposed solar energy center would comprise an area of approximately 550 acres of land. The Applicant intends to construct, own, operate, and maintain all components of the Project.

Project facilities will include commercial-scale solar arrays, access roads, buried (and possibly overhead) electric collection lines, and electrical interconnection facilities. High River Energy Center's interconnection facilities will include a collection substation and POI switchyard. The POI switchyard, as noted previously, will be transferred to National Grid to own, maintain, and operate. The proposed collection substation and interconnection facilities will be located on land within the Project Area, adjacent to National Grid's existing Line # 12 Stoner – Rotterdam 115 kV transmission line.

The proposed Project will have significant positive socioeconomic impacts in the Project Area, in Montgomery County and beyond, through employment opportunities, specifically by generating temporary development and construction employment. In addition, payments to the municipalities

are to be discussed and negotiated through development of a PILOT agreement and/or Host Community Agreement. High River Energy Center will coordinate with municipal officials and provide an update on the status of these agreements as part of the Application.

By adding 90 MW of clean, renewable, solar power into the New York State energy market, the Project is consistent with the 2015 New York State Energy Plan and instrumental in enabling the state to meet the 2030 targets of 40% reduction in greenhouse gas emissions from 1990 levels and 50% of electricity generation from renewable energy sources. The Project will also improve fuel diversity within New York State by increasing the amount of electricity produced by solar generation facilities.

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

The Applicant has endeavored to provide as much information relative to the Project as is reasonably available per PSL 1000.5 (I). Table 6 below provides an overview of the PSL 100.5 (I) requirements and the corresponding section within this PSS where the information has been addressed.

**Table 6. Content of High River Energy Center PSS**

PSL 1000.5(I) Section	Article 10 PSS Requirement	Corresponding Section of the High River Energy PSS	Notes
PSL 1000.5 (I)(1)	as much information as is reasonably available concerning the proposed Facility, generally in the form (though in less detail) that it will appear in the Application;	Section 2.0	Sections 2.1, 2.2, 2.3, 2.4 and 2.5 contain reasonably available information related to existing conditions, potential impacts and minimization/mitigation.
PSL 1000.5 (I)(2)	a preliminary scope of an environmental impact analysis containing a brief discussion, on the basis of reasonably available information, of the following items:	Section 3.0	The detailed subsections of Section 3 (as described below) provide the preliminary scope of an environmental impact analysis based on reasonably available information.
PSL 1000.5 (I)(2)(i)	a brief description of the proposed Facility and its environmental setting;	Section 2.2; Sections 2.3 and 3.03; Sections 3.04, 3.17, 3.19, 3.20, 3.21, 3.22, 3.23, 3.24, 3.25, 3.26, 3.27 and 3.28	Section 2.2 provides a brief description of the Project, Sections 2.3 and 3.03 provide locational information, while Sections 3.04, 3.17, 3.19, 3.20, 3.21, 3.22, 3.23, 3.24, 3.25, 3.26, 3.27 and 3.28 provide a brief description of its environmental setting

PSL 1000.5(I) Section	Article 10 PSS Requirement	Corresponding Section of the High River Energy PSS	Notes
PSL 1000.5 (I)(2)(ii)	potentially significant adverse environmental and health impacts resulting from the construction and operation of the proposed Facility including also an identification of particular aspects of the environmental setting that may be affected, including any material impacts or effects identified in consultations by the public, affected agencies, and other stakeholders, and a responsive analysis by the Applicant as to those issues identified in consultations;	Section 2.2, and 3.10; Sections 3.15, 3.17, and 3.19; Sections 3.12, 3.20, 3.21, 3.22, 3.23, 3.24, 3.25, 3.26, and 3.29	Sections 2.2 and 3.10 provide general information regarding Project benefits; Sections 3.15, 3.17 and 3.19 provide information regarding potential health impacts, and Sections 3.12, 3.20, 3.21, 3.22, 3.23, 3.24, 3.25, 3.26, and 3.29 provide information concerning potential adverse environmental impacts. As of the date of the filing of this PSS, no material impacts have been identified during any consultations.
PSL 1000.5 (I)(2)(iii)	the extent and quality of information needed for the Application to adequately address and evaluate each potentially significant adverse environmental and health impact, including existing and new information where required, and the methodologies and procedures for obtaining the new information;	Section 3.0	Each sub section of 3.0 of the document presents the extent and quality of information anticipated for presentation in the corresponding Exhibit of the Article 10 Application.

PSL 1000.5(I) Section	Article 10 PSS Requirement	Corresponding Section of the High River Energy PSS	Notes
PSL 1000.5 (I)(2)(iv)	for proposed solar-powered facilities, proposed or on-going studies during pre-construction activities and a proposed period of post- construction operations monitoring for potential impacts to avian and bat species;	Section 3.22	Section 3.22 presents information on existing conditions and on-going pre-construction avian and bat studies, as well as proposed post construction monitoring work plan.
PSL 1000.5 (I)(2)(v)	a description of how the applicant proposes to avoid adverse impacts to the environment and health;	Section 3.04, and 3.09; Sections 3.12, 3.15, 3.17, 3.18, 3.19, 3.20, 3.21, 3.22, 3.23, 3.24, 3.26, 3.27, and 3.29	Sections 3.04 and 3.09 provide information on impact avoidance and its role in siting of Project facilities. Sections 3.12, 3.15, 3.17, 3.18, 3.19, 3.20, 3.21, 3.22, 3.23, 3.24, 3.26, 3.27, and 3.29 describe avoidance and minimization measures to the environment and health.

PSL 1000.5(I) Section	Article 10 PSS Requirement	Corresponding Section of the High River Energy PSS	Notes
PSL 1000.5 (I)(2)(vi)	for those adverse environmental and health impacts that cannot be reasonably avoided, an identification of measures proposed to mitigate such impacts;	Section 3.04, and 3.09; Sections 3.12, 3.15, 3.17, 3.18, 3.19, 3.20, 3.21, 3.22, 3.23, 3.24, 3.26, 3.27, and 3.29	Sections 3.04 and 3.09 provide information on impact avoidance and its role in siting of Project facilities. Sections 3.12, 3.15, 3.17, 3.18, 3.19, 3.20, 3.21, 3.22, 3.23, 3.24, 3.26, 3.27, and 3.29 describe avoidance and mitigation measures to the environment and health.
PSL 1000.5 (I)(2)(vii)	where it is proposed to use petroleum or other back-up fuel for generating electricity, a discussion and/or study of the sufficiency of the proposed on-site fuel storage capacity and supply;	Currently not applicable to this Project	

PSL 1000.5(I) Section	Article 10 PSS Requirement	Corresponding Section of the High River Energy PSS	Notes
PSL 1000.5 (I)(2)(viii)	a description and evaluation of applicable, reasonable and available alternative locations identified for the proposed Facility, including a description of the comparative advantages and disadvantages of the proposed and alternative locations, except that a private facility applicant may limit its description and evaluation of alternative locations to parcels owned by, or under option to, such private facility applicant or its affiliates;	Section 3.09	See Section 3.09
PSL 1000.5 (I)(2)(ix)	If the proposed Facility affects any land or water use or natural resource of the coastal area and federal authorization or funding is necessary, a preliminary analysis of the consistency of the proposed Facility with the enforceable policies of the New York State coastal management program or, where the action is in an approved local waterfront revitalization program area, with the local program;	Not applicable to this Project	The Project location is not subject to Coastal Zone Consistency analysis



PSL 1000.5(I) Section	Article 10 PSS Requirement	Corresponding Section of the High River Energy PSS	Notes
PSL 1000.5 (I)(2)(x)	<p>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;</p>	Section 3.09	See Section 3.09

PSL 1000.5(I) Section	Article 10 PSS Requirement	Corresponding Section of the High River Energy PSS	Notes
PSL 1000.5 (I)(2)(xi)	a preliminary identification of the demographic, economic and physical attributes of the community in which the Facility is proposed to be located and in which any alternative location identified is located, and a preliminary environmental justice evaluation of significant and adverse disproportionate environmental impacts of the proposed Facility and any alternative facility identified that would result from construction and operation considering, among other things, the cumulative impact of existing sources of emissions of air pollutants and the projected emission of air pollutants from the proposed or alternative facility in a manner that is in accordance with any requirements for the contents of an Article 10 preliminary scoping statement contained in 6 NYCRR Part 487 promulgated by the NYSDEC for the analysis of environmental justice issues; and	Sections 3.27 and 3.28	See Section 3

PSL 1000.5(I) Section	Article 10 PSS Requirement	Corresponding Section of the High River Energy PSS	Notes
PSL 1000.5 (I)(2)(xii)	an identification of any other material issues raised by the public and affected agencies during any consultation and the response of the applicant to those issues.	Appendix A	As of the date of filing this PSS, no material issues have been raised by the public or affected agencies during consultations that are not addressed by the proposed studies. However, Appendix A of the PSS includes the most recently filed Meeting Log, which outlines all consultation activities conducted by the Applicant since filing the PIP.
PSL 1000.5 (I)(3)	an identification of all other state and federal permits, certifications, or other authorizations needed for construction, operation or maintenance of the proposed Facility;	Sections 3.32 and 3.33	Section 3.32 addresses state laws and regulations. Section 3.33 addresses anticipated federal permits and approvals.

PSL 1000.5(I) Section	Article 10 PSS Requirement	Corresponding Section of the High River Energy PSS	Notes
PSL 1000.5 (I)(4)	a list and description of all state laws and regulations issued thereunder applicable to the construction, operation or maintenance of the proposed Facility and a preliminary statement demonstrating an ability to comply;	Section 3.32	Section 3.32 addresses state laws and regulations.
PSL 1000.5(I)(5)	a list and description of all local laws, and regulations issued thereunder, applicable to the construction, operation, or maintenance of the proposed Facility and a statement either providing a preliminary assessment of an ability to comply or indicating specific provisions that the applicant will be requesting the Board to elect not to apply, in whole or in part, and a preliminary explanation as to why the Board should elect not to apply the specific provisions as unreasonably burdensome in view of the existing technology or the needs of or costs to ratepayers whether located inside or outside of such municipality;	Section 3.31	Section 3.31 addresses local laws and ordinances.

PSL 1000.5(I) Section	Article 10 PSS Requirement	Corresponding Section of the High River Energy PSS	Notes
PSL 1000.5 (I)(6)	a description of the applicant, its formation, status, structure, holdings, affiliate relationships, powers (including whether it has or will seek to obtain the power of eminent domain, either directly or indirectly), franchises and consents;	Sections 2.1 and 3.01	Sections 2.1 and 3.01 provide information on the Applicant, its parent company, and its formation. The Applicant does not plan to seek to obtain the power of eminent domain.
PSL 1000.5 (I)(7)	a description of the applicant's property rights and interests or those it proposes to acquire to all lands of the proposed Facility and any private or public lands or private or public streets, highways or rights-of-way crossed by any interconnections necessary to serve the Facility such as, but not limited to, electric lines, gas lines, water supply lines, waste water or other sewage treatment facilities, communications and relay facilities, access roads, rail facilities, or steam lines; and	Section 3.13	Section 3.13 provides information concerning the Applicant's property rights and interests.

PSL 1000.5(I) Section	Article 10 PSS Requirement	Corresponding Section of the High River Energy PSS	Notes
PSL 1000.5 (I)(8)	any other information that the Applicant may deem to be relevant.	Throughout the PSS document	The document contains additional information beyond the base requirements of PSL 1000.5 Any other information deemed relevant by the Applicant has been included in the PSS.

## 5.0 References

Article 10 Law, §§ 388-1000.1-1002 (Public Service Law 2012).

Bryce, S.A., Griffith, G.E., Omernik, J.M., Edinger, G., Indick, S., Vargas, O., and Carlson, D. 2010. Ecoregions of New York (color poster with map descriptive text, summary tables, and photographs): Reston, Virginia, U.S. geological Survey, map scale 1:1,250,000.

Bugliosi, E.F., R.A. Trudell, and G.D. Casey. 1988. Potential Yields of Wells in Unconsolidated Aquifers in Upstate New York – Hudson-Mohawk Sheet. U.S. Geological Survey Water Resources Investigation Report 87-4275. Prepared in cooperation with the NY State Dept. of Environmental Conservation.

Conservation Science Support, Northeast and Caribbean. (2003). *High Allegheny Plateau Ecoregional Plan: First Iteration*. Retrieved from [https://www.conservationgateway.org/ConservationByGeography/NorthAmerica/UnitedStates/edc/Documents/ED\\_terrestrial\\_ERAs\\_HALfinalreport.pdf](https://www.conservationgateway.org/ConservationByGeography/NorthAmerica/UnitedStates/edc/Documents/ED_terrestrial_ERAs_HALfinalreport.pdf)

*Cultural Resource Information Tool*. Computer software. *SHPO Online Tools*. New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP), Web. Sept. 2016. Retrieved from <http://nysparks.com/shpo/online-tools/>

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.

Environmental Laboratory. 1987. *Corps of Engineers Wetland Delineation Manual*. Technical Report Y-87-1. U.S. Army Corps of Engineers: Waterways Experiment Station; Vicksburg, MS.

Esri. Computer software. *ArcGIS for Desktop*. Vers. 10.3.1., Web. Sept. 2016. Retrieved from <http://desktop.arcgis.com/en/arcmap/>

Montgomery County, NY. (2018). *Montgomery County, New York*. Accessed March 2018 at: <https://www.co.montgomery.ny.us/>

National Wetland Inventory (NWI). (2015). *U.S. Fish and Wildlife Service Wetlands Mapper*. Accessed March 2018 at: <http://www.fws.gov/wetlands/data/mapper.HTML>

New York Independent System Operator (NYISO). (2001). *System Reliability Impact Study Criteria and Procedures*. Accessed March 2018 at [http://www.nyiso.com/public/webdocs/markets\\_operations/services/planning/Documents\\_and\\_Resources/Interconnection\\_Studies/Other\\_Interconnection\\_Documents/ARCHIVE/sris\\_criteria\\_and\\_procedures\\_revised\\_052301.pdf](http://www.nyiso.com/public/webdocs/markets_operations/services/planning/Documents_and_Resources/Interconnection_Studies/Other_Interconnection_Documents/ARCHIVE/sris_criteria_and_procedures_revised_052301.pdf)

New York Office of Real Property Tax Services (NYSORPTS). (2015). *NYSORPTS Municipal Profiles* [website]. Accessed March 2018 at: <http://orpts.tax.ny.gov/MuniPro/>

- New York State Department of Environmental Conservation. (1990-1999). *Herp Atlas Project* [Data file]. Retrieved from <http://www.dec.ny.gov/animals/7483.html>
- NYSDEC (1990) Division of Water Technical and Operational Guidance Series (2.1.3.). Primary and Principal Aquifer Determinations. Retrieved March 2018 from [https://www.dec.ny.gov/docs/water\\_pdf/togs213.pdf](https://www.dec.ny.gov/docs/water_pdf/togs213.pdf)
- NYSDEC. (2000). *Assessing and Mitigating Visual Impacts*. DEP-00-2. Accessed March 2018 at: [http://www.dec.ny.gov/docs/permits\\_ej\\_operations\\_pdf/visual2000.pdf](http://www.dec.ny.gov/docs/permits_ej_operations_pdf/visual2000.pdf)
- NYSDEC. (2001). *Program Policy: Assessing and Mitigating Noise Impacts*. DEP-00-1. Division of Environmental Permits, Albany, New York. Issued October 6, 2000; revised February 2, 2001.
- NYSDEC. (2015). National Ambient Air Quality Standards. Retrieved from <http://www.dec.ny.gov/chemical/8542.html>
- NYSDEC. (2015). *Nuisance and Invasive Species*. Accessed March 2018 at: <http://www.dec.ny.gov/animals/265.html>
- NYSDEC. (2016). Natural Resources and Environmental Protection Maps. Retrieved from <http://www.dec.ny.gov/pubs/103459.html>
- New York State Department of Public Service. (2016). Clean Energy Fund. Retrieved from <https://www.nyserda.ny.gov/About/Clean-Energy-Fund>
- New York State Energy Planning Board (NYSEPB). (2015). 2015 New York State Energy Plan. Retrieved March 2018 from <https://energyplan.ny.gov/>
- New York State Public Service Commission (PSC). 2004. *Order Regarding Retail Renewable Portfolio Standard*. Issued and Effective September 24, 2004.
- PSC. 2015. *Order Adopting Regulatory Policy Framework and Implementation Plan*. Case 14-M-0101, Proceeding on Motion of the Commission in Regard to Reforming Energy Vision. Issued and Effective February 26, 2015.
- New York State Standards and Specifications for Erosion and Sediment Control (Blue Book). Retrieved September 2016, from <http://www.dec.ny.gov/chemical/29066.html>
- Protection of Waters Program, 6 § 15-608 (Environmental Conservation Law).
- Preliminary Scoping Statement: Mohawk Solar, Montgomery County, New York*. Prepared for Mohawk Solar LLC, a subsidiary of Avangrid Renewables LLC, Portland, OR. Prepared by Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D.P.C. 217 Syracuse, NY.
- Statement of Interim Policy on Magnetic Fields of Major Electric Transmission Facilities. Rep. No. 26529, 26559 (1990).



- The Energy to Lead, 2015 New York State Energy Plan. *Article 6 Energy Law*, 1, 1-126. Retrieved March 2018, from <https://energyplan.ny.gov/Plans/2015>
- United States Department of Agriculture, Natural Resources Conservation Service (NRCS). 2015. *Web Soil Survey*. Retrieved from <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm> (Accessed March 2018).
- United States Army Corps of Engineers (USACE). (2012). *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: North central and Northeastern Region*. Version 2.0. January 2012.
- United State Army Corps of Engineers (USACE). (1999). *The Highway Methodology Workbook Supplement*. Accessed March 2018 at: <http://www.nae.usace.army.mil/Portals/74/docs/regulatory/Forms/HighwaySupplement6Apr2015.pdf>
- United States Census Bureau. (2015). *American Fact Finder*. Accessed March 2018 at: <http://factfinder.census.gov/>
- United State Department of Agriculture, National Agricultural Statistics Service. (2015). *CropScope and Cropland Data Layer*. Accessed March 2018 at: [https://www.nass.usda.gov/Research\\_and\\_Science/Cropland/Release/](https://www.nass.usda.gov/Research_and_Science/Cropland/Release/)
- U.S. Department of Agriculture, Natural Resources Conservation Service. (2006). *Land Resource Regions and Major Land Resource Areas of the United States, the Caribbean, and the Pacific Basin*. U.S. Department of Agriculture handbook 296.
- United States Department of Transportation, Federal Highway Administration. (2006). *Roadway Construction Noise Model User's Guide*. FHWA-HEP-05-054.
- United States Energy Information Administration. (2016). *New York State Profile and Energy Estimates*. Accessed March 2018 at: <http://www.eia.gov/state/?sid=NY#tabs-1>
- United States Environmental Protection Agency (USEPA). *United States Environmental Protection Agency*. Accessed March 2018 at: <https://www3.epa.gov/>
- United State Fish and Wildlife Service (USFWS). (2016). *Information for Planning and Conservation (IPaC)*. Retrieved from <https://ecos.fws.gov/ipac/>