PRELIMINARY SCOPING STATEMENT PURSUANT TO ARTICLE 10 OF THE NEW YORK STATE PUBLIC SERVICE LAW

Shepherd's Run Solar Project

Town of Copake,
Columbia County, New York

Case No.: 20-F-0048

Applicant:

Hecate Energy Columbia County 1 LLC
621 W. Randolph Street,
Chicago, Illinois 60661
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July 2020

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1.0 INTRODUCTION

Hecate Energy Columbia County 1 LLC (the Applicant), a subsidiary of Hecate Energy, LLC (Hecate Energy), plans to submit an application to develop, construct, own, operate, and maintain a 60-megawatt (MW) photovoltaic (PV) solar energy generation facility and associated infrastructure (the Shepherd's Run Solar Project or the Project) in the Town of Copake, Columbia County, New York, 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), the Applicant is proposing to submit an application to construct a major electric generating facility under Article 10 (Application) and must submit a Preliminary Scoping Statement (PSS) no less than 90 days prior to filing the Application and no sooner than 150 days after submission of the Public Involvement Program Plan (PIP Plan). The PIP Plan was filed on January 31, 2020.

The Applicant continues to employ activities intended to strengthen stakeholder involvement and knowledge of the Project PIP Plan. The Applicant is conducting stakeholder outreach as well as consultation 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 Secretary of the Siting Board approximately once quarterly and is available on the Applicant's website (http://www.shepherdsrunsolar.com). The most recent Meeting Log is included with the 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.

This PSS will 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 New York Codes, Rules, and Regulations (NYCRR) § 1000.5(l) and includes, but is not limited to, a description of the Project and its environmental setting; identification of potentially significant adverse environmental or health impacts; identification of proposed studies to evaluate potential impacts and measures to avoid or mitigate adverse impacts; identification of reasonable and available alternative locations; identification of applicable substantive state and federal requirements; and a list and description of all applicable substantive local laws and regulations and a preliminary assessment of an ability to comply.

Following submission of the PSS, any person, agency, or municipality may submit comments on the PSS within 21 days of the PSS submission by filing a copy of those comments with the Applicant and the Secretary to the Siting Board. Any person who chooses to file comments on the PSS shall adhere to the filing requirements provided in the Notice accompanying this document (see Appendix B).

2.0 APPLICANT AND PROJECT DESCRIPTION

2.1 Company Profile

The Applicant is uniquely qualified to carry out a wide range of development projects, at any stage, with an unmatched level of energy, professionalism, and dedication. Founded in 2012 by a team of industry veterans who have worked together for over 20 years, the Applicant's parent, Hecate Energy, has entered into over 1.4 gigawatt (GW) of renewable power purchase agreements (PPA), including over 250 megawatt hours (MWh) of battery storage contracts. To date, Hecate Energy has developed and built 363 MW of operating solar projects and 58 MWh of battery storage projects totaling over $600 million in asset value. Hecate Energy is engaged in offtake negotiations for an additional 1 GW of new solar PPAs and has an active development pipeline of over 8 GW of renewable projects.

2.2 Applicant and Project Description

The Project will be capable of generating up to 60 megawatts (MWac) of power and is located on land that will be leased from private property landowners located in the Town of Copake, Columbia County, New York (see Figure 1).

The Project will include commercial-scale solar arrays, access roads, inverters, buried (and potentially overhead) collection lines, a collection substation, a generation tie line and point of interconnection (POI) substation, fencing, and laydown areas, and potentially energy storage (if included in the final Project design). The POI will be the Craryville 115 kilovolt (kV) substation owned by New York State Electric and Gas (NYSEG) and located just north of Main Street (Route 23) in the Town of Copake, New York. The collection substation will be owned by the Applicant and located adjacent to the Craryville substation. A 115 kV line currently extends from Craryville Substation to Klinekill Substation and Churchtown Substation. The Applicant anticipates interconnecting via one span of overhead line with no structures in between the collection substation and existing Craryville Substation (see Figure 2).

The Project will have positive socioeconomic impacts both within the Project Area and within the surrounding communities through local contributions to local tax bases, temporary construction employment opportunities, and procurement of goods and services during operations. Based on similar project experience elsewhere, the Project estimates that approximately over 200 temporary construction jobs (peak) will be created during the approximate nine to 12 months of construction. Local construction employment will primarily benefit those in construction trades, including equipment operators, truck drivers, laborers, and electricians. Operation of the Project will also require two to three full-time equivalent local permanent employment positions. Further, the Applicant intends to discuss a payment-in-lieu-of-taxes (PILOT) arrangement with the relevant jurisdictions.

The Project is compatible with New York State's policies that promote renewable energy goals, including the 2015 New York State Energy Plan (SEP) (as amended in 2020), the New York State Public Service Commission's Clean Energy Standard (CES), and the Climate Leadership and Community Protection Act (CL&CPA) requiring New York's electricity to be generated by 70 percent carbon-free sources by 2030 and 100 percent by 2040. Additionally, the Applicant has a Renewable Energy Standard Agreement, otherwise known as a Renewable Energy Certificate (REC), with New York State Energy Research & Development (NYSERDA) for the development

of the Project. RECs represent one MWh each of electricity to be generated by renewable energy resources and supplied to the power grid.

2.3 Project and Study Area

Figures 1 and 2 depict the regional Project location and the Project Area, and the preliminary Study Area to be used for analysis. For the purposes of this document, the Project is defining these areas as follows:

- The Project Area encompasses the parcels being evaluated for placement of permanent Project components, including the commercial-scale solar arrays, access roads, inverters, buried (and potentially overhead) electric collection lines, generation tie line and POI, collection substation, fencing, laydown areas, and potential energy storage system, if included in the final Project design. The Project Area is inclusive of approximately 900 acres of land within the area in the Town of Copake that continues to be studied, as depicted in Figure 2. Once the studies are finalized, the Applicant will be able to site the Project in a manner to minimize community and environmental impacts.

- Consistent with 16 NYCRR § 1000.2(ar), the Study Area (also shown on Figure 2) encompasses all areas within at least two miles of the property lines of the current land parcels planned for the location of Project components, interconnections and related facilities (including a potential energy storage system) and includes approximately 18,344 acres of land (inclusive of the approximately 900-acre Project Area). The Study Area includes the Towns of Copake, Hillsdale, Claverack, and Taghkanic in Columbia County, New York. In support of the required studies in the Application, some studies may use stud areas greater than a two-mile radius from the Project Area boundaries as discussed in this PSS to ensure studies are completed at appropriate distances to most accurately identify potential, direct, and/or indirect, impacts of the Project.

- Off-site is defined as any land located outside of the defined Project Area.

- On-site is defined as any land located within the defined Project Area.

- In reference to archaeological resources, the Area of Potential Effect (APE) is defined as any area where significant ground disturbance may occur as a result of the construction of access roads, workspaces, collection lines, the proposed collection substation and interconnection facilities (inclusive of a potential energy storage system), or other areas of significant ground-disturbing activities proposed within the Project Area (e.g., grading).

These terms will be used throughout this PSS as well as the Application. Additional standard terminology and acronyms will be included in the Application.

2.4 Summary of Pre-Application Activities

In advance of this PSS, the Applicant prepared and submitted a PIP Plan to the New York State Department of Public Service (NYSDPS) in January 2020, in accordance with 16 NYCRR § 1000.4. Following submission of the PIP Plan, the Project was assigned the Case Number 20-F-0048. Comments on the PIP Plan from NYSDPS were received on March 02, 2020 and the Applicant provided responses to each comment and a revised PIP on April 2, 2020. Paper copies of the revised PIP Plan were provided to the following document repositories for public review:

- Town of Copake Town Hall, 230 Mountain View Road, Copake, NY 12516
- Roeliff Jansen Community Library, 9091 State Route 22, Hillsdale, NY 12529

The PIP Plan may also be accessed on the NYSDPS online case record website maintained by the Siting Board (http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterSeq=61864&MNO=20-F-0048) and on a Project-specific website maintained by the Project (http://www.shepherdsrunsolar.com/) by hovering over the "Permitting" tab and selecting the "Public Involvement" tab.

2.5 Organization of the Preliminary Scoping Statement

This PSS has been organized in accordance with 16 NYCRR § 1001, with all sub-sections in Section 3.0 (Contents of Application), which directly corresponds to each Exhibit that will be included in the Application (set forth in 16 NYCRR § 1001). A content matrix has been created and is included in Section 4.0 (Summary and Conclusions) of this document to comply with the required and applicable contents for this PSS set forth in 16 NYCRR § 1000.5(l).

This PSS is preliminary in nature as it presents Project-specific information that is reasonably accurate and available in the early stages of development. The Applicant will work to bring the Project toward a more detailed final design and will present any advanced development including changes and refinements within the Application. Advanced development described and depicted within the Application may include, but shall not be limited to, the locations of proposed solar PV arrays and Project components, the linear distances of Project components, and potential impacts that may result from construction, operation, or decommissioning phases of the Project. Potential impacts will be evaluated according to site-specific survey results and preliminary desktop reviews of the Project Area and, where applicable, the Study Area. Figures and appendices have been included at the end of this document to supplement the preliminary Project information presented within the text of this PSS.

3.0 CONTENTS OF APPLICATION

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

The Project is being developed by the Applicant within the Town of Copake, Columbia County, New York.

Applicant: Hecate Energy Columbia County 1 LLC
621 W. Randolph Street
Chicago, IL 60661
Telephone: (312) 722-5900
Fax: (312) 284-4514
Email: contact@shepherdsrunsolar.com

Project Website: www.shepherdsrunsolar.com

Principal Officer, Public Contact, and Designated Agent: Mr. Alex Campbell
621 W. Randolph Street, Chicago, IL 60661
Telephone: (833) 529-6597
Fax: (312) 284-4514
Email: acampbell@hecateenergy.com

Mr. Alex Campbell will serve as the primary point of contact for document service. Any additional document service requested for the Applicant's agent or counsel, and their associated contact information, will be indicated within the Application.

Project-specific questions may be directed to the Applicant's email (contact@shepherdsrunsolar.com) or at (312) 722-5900. The toll-free number established for the Project will be included in the Application where public contact information is requested and included on the Public Notice. Facts about the Project and documents submitted to the NYSDPS, and made publicly available, are also provided on the Project website (www.shepherdsrunsolar.com).

Hecate Energy Columbia County 1 LLC is a limited liability company established on February 1, 2017 in Delaware to develop, own, operate, and maintain the Project in the Town of Copake, Columbia County, New York. Hecate Energy Columbia County 1 LLC is a wholly owned subsidiary of Hecate Energy LLC (Hecate Energy). Hecate Energy is located at 621 W. Randolph Street, in Chicago, Illinois 60661. Formation documents, including a copy of the certificate, will be included as part of the Application.

Proposed Exhibit 1 Contents

Per 16 NYCRR § 1001.1 General Requirements, the following items will apply to each exhibit included in the Application:

(a) The Application for a Certificate of Environmental Compatibility and Public Need (Certificate) shall contain the exhibits described by Part 1001 as relevant to the Project technology and site, and such additional exhibits and information as the Applicant may consider relevant or as may be required by the Siting Board or the Presiding Examiner. Exhibits that are not relevant to the particular application have been omitted.

(b) Each exhibit shall contain a title page showing:

(1) The Applicant's name.

(2) The title of the exhibit.

(3) The proper designation of the exhibit.

(c) Formatting:

(1) Each exhibit consisting of 10 or more pages of text shall contain a table of contents citing by page and section number or subdivision the component elements or matters contained in the exhibit.

(2) Each exhibit that includes reference or supporting documents such as attachments or appendices shall contain a table of contents that indicates those supporting documents. The location of information within the Application (including exhibits, attachments and appendices, specifically addressing the relevant requirements of 16 NYCRR § 1001) will be clearly identified either in the table of contents or in the form of a matrix in order to ensure completeness and facilitate review. The Application will provide a list of acronyms as an appendix to the Table of Contents. All reference citations within the body of an exhibit will be fully cited at the relevant list of reference documents.

(3) Shapefiles for the Project will be included as applicable as noted in (d)(1) below and shall depict:

(a) The location of all Project components including (separately):
  (i) Extent of the facility or Project Area.
  (ii) All parcels under the Applicant's control or under negotiation.
  (iii) Proposed locations of panels, access roads, electric interconnections, fencing, storage areas, substations, etc.
  (iv) Solar array locations.
  (v) New access and maintenance roads.
  (vi) Existing roads that will be widened/altered.
  (vii) Electric collection and transmission lines (specified above ground and/or underground).
  (viii) Security fence lines, if applicable.
  (ix) Laydown and storage area(s).
  (x) Substation(s).
  (xi) Other temporary or permanent infrastructure constructed in support of the Project.
  (xii) All areas to be cleared around solar arrays, access roads, electric lines, and all other Project components.

(4) All wildlife and habitat survey locations as applicable and labeled by year including (separately):

(a) Breeding bird survey locations, including transects, points and driving routes, as applicable.
(b) Eagle/raptor survey locations.
(c) Viewsheds for eagle/raptor and winter raptor observation points, indicating the area visible from each point.
(d) Bat acoustic monitoring and/or mist net locations, if applicable.
(e) Aerial raptor nest survey area and transects.
(f) Boundaries of all delineated wetlands, adjacent areas, and streams.
(g) The location(s), observation date(s), species, and behavior(s) of all threatened and endangered (T&E) and species of special concern (SSC) individuals on the landscape observed during pre-construction surveys and incidentally within and adjacent to the facility; and any other survey information pertinent to the Project. Attributes shall include the

species, number of individuals, dates, flight path, behaviors, and survey type, as applicable.

(5) All proposed impact areas including (separately):

(a) Areas to be removed, cleared or disturbed overlaid with approximate locations and extent of identified plant communities, including areas of invasive species concentrations.
(b) Limits of disturbance/vegetation clearing.
(c) Stream crossing locations.
(d) Wetland and stream impacts.
(e) Wetland delineations within 100 feet of limits of disturbance, including identification of vernal pools, if any.

(d) In collecting, compiling, and reporting data required by 16 NYCRR § 1001, the Applicant shall establish, where available and applicable, a basis for statistical comparison with data that shall subsequently be obtained under any program of post-certification monitoring. In addition, the Applicant will provide the New York State Department of Environmental Conservation (NYSDEC) and NYSDPS, contemporaneously with the filing of the Application, shapefiles suitable for use in geographic information system (GIS) software via Environmental Systems Research Institute's (Esri) ArcGIS suite of software containing all applicable Project and survey components using NYSDEC's *Guidelines for Conducting Bird and Bat Studies at Commercial Wind Energy Projects* (June 2016) as guidance. Applicable shapefiles will also be provided to accompany any applicable wildlife and habitat survey reports when they are ready to be submitted by the Applicant.

(1) GIS shapefiles of Facility components and site locations, property lines, environmental data, visual and cultural resource locations, and related analyses derived from such data and utilized in development of the Application and mapping, at the time the Application is filed, and to all other Parties upon request, subject to confidentiality restrictions.

(e) If the same information is required for more than one exhibit, it may be supplied in a single exhibit and referenced in other exhibit(s) where it is also required.

(f) Exhibit 1 shall also contain:

(1) The name, address, telephone number, facsimile number, and e-mail address of Hecate Energy Columbia County 1 LLC.

(2) The address of a website established by the Applicant to disseminate information to the public regarding the Application.

(3) The address, telephone number, facsimile number, and e-mail address of Alex Campbell who is the person that the public may contact for more information regarding the Application.

(4) The business address, telephone number, facsimile number, and e-mail address of the principal officer of the Applicant, Alex Campbell, Project Developer.

(5) If the Applicant desires service of documents or other correspondence upon an agent, the name, business address, telephone number, facsimile number, and e-mail address of the agent.

(6) A brief explanation of Hecate Energy Columbia County 1 LLC, a wholly-owned subsidiary of Hecate Energy LLC, including its date and location of formation and the name and address of its parent.

(7) A certified copy of the certificate of formation for Hecate Energy Columbia County 1 LLC will be provided with the Application.

3.02 Overview and Public Involvement (Exhibit 2)

Description

The Project consists of a 60-MW solar PV energy generation facility located in the Town of Copake, Columbia County, New York. The Project Area (see Figure 2) will consist of approximately 900 acres of land within the outline which continues to be studied, and primarily consists of agricultural and forested land. Of the approximately 900 acres of land within the Project Area, the Project and its associated components will occupy approximately 400 to 500 acres of land.

A detailed description of the proposed solar arrays and Project component locations will be provided in the Application. The proposed interconnection point for the Project is located within the Town of Copake, New York between a new collection substation and the Craryville 115 kV substation, off of which the Craryville-Klinekill and Churchtown-Craryville 115 kV transmission lines extend. The Applicant anticipates the interconnection facilities will include a 115 kV substation and a potential energy storage system, which will be owned, operated, and maintained by the Applicant throughout the life of the Project.

Application Content Summary

Contents of the Application will adhere to all applicable sections of PSL Section 164 and 16 NYCRR § 1001 (Content of an Application). This PSS provides preliminary design information for the Project, as is reasonably available, with supporting figures and appendices. However, the Application will provide more final, detailed conceptual design information, analyses, and supporting documentation.

Pre-Application Public Involvement

As previously mentioned, the Applicant prepared a PIP Plan in accordance with the requirements set forth in 16 NYCRR § 1000.4. The PIP Plan was submitted to the NYSDPS on January 31, 2020 and revised on April 2, 2020 to update and finalize the PIP Plan per NYSDPS staff recommendations. The PIP Plan serves to introduce the Project and explain the intent to comply with New York's legal and regulatory requirements for major electric generating facilities. The PIP Plan also identifies the process to become actively engaged in Project updates, notify of upcoming public outreach and involvement activities, and involve affected stakeholders. The Applicant has

completed the pre-PSS consultations set forth in the PIP Plan's Appendix B and has held multiple stakeholder meetings. Public involvement activities completed to date are included in the updated PIP Plan Tracking Report (or PIP Meeting Log) as Appendix A. The final PIP Plan is included herein as Appendix C.

Following consultations with NYSDPS, a Supplement to the PIP Plan was filed with the Secretary on June 4, 2020. It provides that, considering the New York restrictions against public gatherings due to the pandemic, scheduling of the in person open houses before the filing of this PSS would not be possible or prudent. Therefore, as an alternative to the in-person pre-PSS open houses, the Applicant has mailed a postcard to the public within 2.5 miles of the Project Area boundary. The Applicant mailed postcards to approximately 2,760 addresses including host and adjacent landowners within the Study Area on June 8, 2020. The postcard provides information on how to access an informational packet, available at the Project's website (provided in the postcard) and provides opportunity for comments and questions about the Project from the public within a 2-week period. Notification of the availability of the informational packet was also publish in three local newspapers. Hard copies of the informational packets were made available at Copake Town Hall and postcard recipients were also given the option to request a hard copy for themselves. Comments and responses to comments and questions will be posted on the Project website and on NYSDPS's Document and Matter Management (DMM) website. Copies of all filed or public outreach documents are available on the Project website at www.shepherdsrunsolar.com. The Applicant intends to hold the other two open house events as proposed in the PIP Plan prior to submittal of the Application (on the same day, one mid-day and the other in the evening) and will schedule those after public gathering restrictions relative to COVID-19 are lifted and they can be held safely.

Additionally, the Applicant held a meeting with the Town of Copake on January 23, 2020 at the Town Hall to introduce and discuss the Project with the Town Supervisor, Councilpersons, and Planning Board Chairman. The Applicant has taken part in numerous calls with the Deputy Town Supervisor regarding the status of the Project.

Post-Application Public Involvement

The Applicant understands the importance of providing opportunities for the public to become involved in Project discussions and will continue to engage stakeholders throughout the entire duration of the Article 10 process, beyond submission of the Application.

As such, PIP Plan activities will continue to be tracked and filed in the PIP Meeting Log (Appendix A). The updated PIP Meeting Log will also be posted on the Project website and submitted to the Secretary quarterly.

PSS Distribution and Notification Efforts

Per 16 NYCRR § 1000.5 and § 1000.6, a notification indicating the filing of the PSS is available on the Project website and has been published in the following newspapers and websites:

- The Register-Star, a paid-subscription daily newspaper serving Columbia County;
- The Columbia Paper, a paid-subscription weekly newspaper serving Columbia County;
- The Columbia & Greene Shop & Find, a free weekly savings guide serving Columbia and Greene Counties; and
- Hudson Valley 360, a free online resource.

Additionally, the stakeholder list has been notified of the PSS filing per the recipient's preference (email or mail). An updated stakeholder list, which includes host and adjacent landowners and other parties identified during stakeholder outreach efforts, and proof of the mailing and newspaper publication has been included with this filing (see Appendix D). Adjacent landowners included on the updated stakeholder list are those landowners within 2,500 feet of the Project Area parcel boundaries. Copies of the PSS have been provided at the following local document repositories:

- Town of Copake Town Hall, 230 Mountain View Road, Copake, NY 12516
- Roeliff Jansen Community Library, 9091 State Route 22, Hillsdale, NY 12529

Proposed Exhibit 2 Contents

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 Project, including the commercial-scale solar arrays, access roads, inverters, buried (and potentially overhead) electric collection lines, collection substation, generation tie line and POI, fencing, laydown areas, and a

potential energy storage system. The Application will provide Project component dimensions given in meters by the equivalent value in feet.

(1) In the description of the solar array, the Applicant will provide the manufacturer's specification sheets and will indicate whether the panels will be solar tracking or fixed, as applicable. To the extent the proposed panel has been selected, the information will be provided in the Application. If the precise panel has not been selected, typical information for the proposed panel will be presented.

(b) A brief summary of the contents of the Application, except those exhibits which do not apply to the 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 implementation of the PIP Plan (i.e., resulting from outreach efforts). Additionally:

(1) Specific components of the PIP conducted to date and the topics addressed will be discussed, including: opportunities for public involvement; development and use of the stakeholder list (including host and adjacent landowners); identification of 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.shepherdsrunsolar.com), and a toll free 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 planning to have a local office.

(2) The description shall include public involvement activities regarding the filing of the Project Application. Notice of the Application submittal will be mailed in accordance with 16 NYCRR § 1000.6 and § 1000.7. In addition, notice will be mailed to a Project mailing list consisting of the updated stakeholders list, including host and adjacent landowners, and additional addresses received through public outreach. The notice will include information on the Project generally and the Article 10 Application specifically. A copy of the mailing list and documentation indicating the

dates and mailings that were made will be provided to the Secretary. The Application will include the updated stakeholder list.

(3) In addition to newspaper publication as required under 16 NYCRR 1000.7(a) the Applicant will publish notice about the Application in at least one free local community newspaper circulated in the Project and Study Area (as defined in the PSS), if available.

(4) Regarding the informational flyer described above, additional details will be listed, including when the informational flyers were mailed, when notification was placed in the newspapers, details about who was sent informational mailers, posted comments on websites, and how many people attended any open house events that were able to be conducted. Information on the types of comments that were received and whether the Applicant took follow-up actions will be included in the Application.

(5) The Application will provide a summary of questions asked at outreach events and meetings. The Applicant will indicate how it addressed or plans to address the questions. Additional public involvement activities will be included in the Project's PIP meeting log that can be found on the Project website and the NYSDPS DMM website, which will be listed in this Exhibit. Further information will be provided in the Application.

(d) A brief description of the PIP Plan with examples of outreach 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 Project which the Applicant believes the Siting Board should use as the basis for its decision. The analysis shall be analytical and not encyclopedic and shall specifically address each required finding, determination and consideration the Siting Board must make or consider in its decision pursuant to Section 168 of the PSL and explain why the Applicant believes the requested Certificate should be granted.

(f) Paper copies of major Project documents, except those subject to protective order, will be sent to the designated local repositories.

3.03 Location of Facilities (Exhibit 3)

The regional location of the Project is depicted on Figure 1 and the currently proposed Project Area and Study Area are depicted on Figure 2. The Study Area consists of land within a 2-mile radius of the Project Area boundary. A detailed topographic map based on a 2019 (or most recent) version of the United States Geologic Survey (USGS) 1:24,000 edition for the Hillsdale topographic quadrangle will be provided in the Application and will include contours, roads, railways, utility corridors, streams, waterbodies, and other features of interest. The scale of figures will be sufficient for detailed Project location information, identification of local roads, and clear identification of Project components.

The Project layout will be shown on topographic base maps (USGS) and aerial photographs (Esri) to clearly identify the locations of each Project component relative to the surrounding environmental and land use resources. Municipal boundaries (county, city, town, and village) will be provided on appropriate mapping and obtained from the NYS GIS Clearinghouse and Esri. Each figure will include base map source(s), formatting, layout sizes, and scales specific to Article 10 requirements for the Application. Additionally, the Applicant will supplement Project location information with GIS shapefiles to provide to the NYSDPS as part of the Application.

A written Project description and representative mapping will identify the Project component locations based upon reasonably available information, including:

- Commercial-scale solar arrays,
- Inverters,
- Access roads,
- Fencing,
- Collection lines (buried and possibly some overhead),
- Generation tie line and POI interconnection,
- Collection substation,
- Laydown/staging areas, and

- Potential energy storage system.

All Project components will be sited entirely within the Project Area on privately owned land obtained via lease agreements with the landowners. The Project does not include any ancillary features located outside the Project Area boundary.

Proposed Exhibit 3 Contents

The Applicant proposes to collect, evaluate, and provide the following information to support and prepare Exhibit 3 of the Application in accordance with 16 NYCRR § 1001.3.

Exhibit 3 shall contain maps, drawings, and explanations showing the location of the Project, on-site interconnections, and any other on-site ancillary facilities.

Exhibit 3 shall contain maps, drawings, and explanations showing the location of the Project, onsite interconnections and any other onsite ancillary facilities. No offsite facilities are proposed.

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 Project components including commercial scale solar arrays, access roads, collection lines, on-site laydown/staging areas, collection substation, and potential energy storage system. Mapping will include the locations of roads, substations, and similar facilities, as applicable. The Project is not anticipated to include an operation and maintenance (O&M) building. The Applicant will specify the location of the collection substation and will provide a map detailing the location of access roads from public roadways to be utilized for construction and operation of these facilities.

(2) The proposed location of 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 Public Service Commission's (PSC'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, switchyards, fuel or energy storage or regulation facilities, and similar facilities, that are not subject to the Siting 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 Project is not located in areas of significant resource concerns that would justify expanding the Study Area.

(b) Maps clearly showing the location of the proposed Project Area and Study Area, which will be a two-mile Study Area unless otherwise noted. Mapping will also show the interconnections, including electric collection lines, collection substation, and generation tie line 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, generation tie line, and collection substation in relation to affected municipalities, taxing jurisdictions, designated neighborhoods or community districts.

3.04 Existing Land Use and Project Planning (Exhibit 4)

Figure 3 shows existing land uses within the Project Area and classification codes using publicly available data from the Columbia County Planning Department and the New York State Office of Real Property Tax Services (NYSORPTS). The NYSORPTS's land classifications include Agricultural, Residential, Vacant Land, Commercial, Recreation and Entertainment, Community Services, Industrial, Public Services, and Wild, Forested, or Conservation Lands and Public Parks, and are used to identify different land use types within the Project Area. Within the Application, land uses will be described based on desktop evaluations and other site-specific investigations and documentation. The Applicant will further evaluate land classified by the NYSORPTS as Vacant Land from a review of aerial photography in combination with any land use information obtained in consultation with participating landowners. Figure 4 provides additional context for existing land use showing the various vegetative cover types including forested lands, scrub shrub land, hay/pasture, and other covertypes.

A majority of the Project Area is located within Columbia County's Agricultural District 1 (COLU001) (CUGIR, 2019). Agricultural uses within the Project Area consist of pasture, hay fields, and cultivated crops (primarily consisting of corn). From a review of the Natural Resources Conservation Service (NRCS) Web Soil Survey mapping, a total of 24 soil units were identified within the Project Area. Of these 24 soils, five are designated as Farmland of Statewide Importance, seven are designated as All Areas Are Prime Farmland, two are designated as Prime Farmland If Drained, and the remaining ten soil units are designated as Not Prime Farmland (USDA NRCS, 2019).

The Application will depict the various farmland classifications listed above relative to the Project Area and Study Area. The Application will also include a description of avoidance and minimization measures for impacts anticipated to occur to Prime Farmland during Project siting, construction, and operation. The description will include proposed methods for soil stripping, storage, and replacement upon construction completion in areas where disturbance cannot be avoided.

Mapping of existing transmission facilities (e.g., electric, gas, or telecommunications) within the Study Area will be included in the Application and will be based on publicly available information, consultation with the Host Municipality, local utility companies, and NYSDPS staff.

The Application will depict special designation areas including mapped flood prone zones, critical environmental areas and recreational/sensitive areas and will be prepared using up-to-date databases, such as the NYS GIS Clearinghouse and agency sources. Additionally, any publicly known, proposed land uses for the proposed Project parcels will be included on Project mapping from the Host Municipality or Columbia County Planning Department.

Parcels located within the Study Area will be represented on aerial photography mapping in the Application. Project components, access and maintenance roads, and clearing limits will be overlain on aerial photography mapping to depict the relationship between existing and proposed structures with vegetation cover types. Aerial photography dates and sources will be included in the Application.

Municipal planning documents for municipalities located within the Project Area were reviewed to identify any existing or proposed comprehensive plans. The Town of Copake's Comprehensive Plan, published in 2011, states that "new sources of revenue such as wind and solar should be explored" (Town of Copake, 2011).

A qualitative assessment of the Project's compatibility with existing, proposed, and allowable land uses will be presented in the Application. This qualitative assessment will include evaluation of the Town's Comprehensive Plan and compatibility of the Project's proposed aboveground structures with surrounding land uses.

The Application will also include a description of the community character within the Study Area, an impact analysis on community character as a result of the Project, and any associated proposed avoidance and mitigation measures to alleviate potential impacts, if necessary.

Proposed Exhibit 4 Contents

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 the Project components in relation to existing land uses within the Study Area (area within a two-mile radius of the Project Area boundaries) using publicly available GIS data from Columbia County Planning Department. The "Columbia County Parcel Data" data set, derived from the Property Class attribute, will be utilized to produce the scaled map. The Study Area includes approximately 18,344 acres of land (inclusive of the approximately 900-acre Project Area).

(1) Land use classification codes of the NYSORPTS 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 participating 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. The land use will be described and mapped based on site-specific investigations and documentation. To further define land uses on land classified by the NYSORPTS as Vacant Land within the Project Area, the Applicant will report regarding its efforts to inquire about current land uses of current vacant land through coordination with the participating landowner, and also provide information received in outreach efforts and open house events.

(d) A scaled map of existing and proposed zoning districts within the Study Area will be created by data obtained from local governments; and will include a description of the permitted and prohibited uses within each zone.

(e) A discussion of the Project's consistency with the Town of Copake Comprehensive Plan dated 2011. The Town of Copake's Comprehensive Plan is posted on the Town's website and the Exhibit will 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, current agricultural use, flood-prone zones, and recreational/sensitive areas. Agricultural districts will be specified, as designated by New York State Department of Agriculture and Markets (NYSDAM) regulations. Additional discussion of agricultural land (including a description of cover types [i.e., grassland, row crops, pasture/hay, and/or fallow fields, etc.] present in the Project Area) will be included in Exhibit 22. Flood hazard areas will be specified according to data from the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps. There are no coastal areas, local waterfront revitalization program areas (NYSDOS, 2020), State Environmental Quality Review Act (SEQRA) designated critical environmental areas (NYSDEC, 2005), or groundwater management zones within the Study Area of the Project. The Application will include an analysis of Taghkanic Creek, a designated inland waterway, located in the center of the Project Area, will be discussed in this section.

(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 Project, interconnections and related facilities, including wild, scenic, and recreational river corridors, open space, and 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 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 Project Area 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. If known off-site staging and/or storage areas will be used for Project construction, a qualitative assessment of the compatibility of the proposed offsite staging and/or storage areas with existing, proposed, and allowed land-uses will also be provided. Final locations of any offsite staging areas will be confirmed in the Compliance Filing, or with the Secretary, as applicable.

(j) A qualitative assessment of the compatibility of proposed aboveground 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 will reflect the current situation and specify the source and date of the photography. To the extent that any material changes in land use have occurred since those photos were taken, the Applicant shall identify those changes in this Exhibit.

(n) Overlays on aerial photographs which clearly identify the Project Area with all proposed Project facilities and interconnection route, access roads and limits of clearing, in order to show the relationships with existing structures and vegetation cover types field-verified by the Applicant.

(o) Aerial photographs of all properties within the Study Area of such scale to provide detail, discrimination, and identification of natural and cultural features. 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 based on the Town of Copake Comprehensive Plan and the Columbia County Agriculture & Farmland Protection Plan, as well as information obtained through PIP Plan activities. PIP Plan activities will continue after submission of the Application.

(q) Photographic representations of the Project Area and the two-mile Study Area, as applicable, for the Project, will be included to depict existing characteristics of the Project and surrounding area setting.

(r) Mapping of the Project Area with farmland classifications (e.g., Prime Farmland, Prime Farmland if Drained, Farmland of Statewide Importance, etc.). Also, a discussion of how the Project will avoid or minimize, or mitigate, to the maximum extent practicable, impacts to agricultural soils with the "Prime Farmland" classification will be included. An analysis of the Prime Farmland, Prime Farmland if Drained, and Farmland of Statewide Importance to be occupied by solar components and the effects it would have on use of that land for future farming operations will also be included, as applicable.

(s) Identification of farmland classifications located within the Project's proposed limits of disturbance.

(t) The Application will include a map of all publicly known proposed land uses within the Study Area, for which required permit applications have been filed with the appropriate permitting authority, from interviews/consultations with state and local planning officials,

from the public involvement process, or from other sources. The potential cumulative impact of these identified publicly known proposed land uses within the Study Area along with the Project on farmland will be discussed, as will farmland conversion trends over the past 20 years within the Study Area.

(u) Agricultural impacts will be discussed relative to the goals of the Columbia County Agriculture & Farmland Protection Plan, the construction and lifespan of the Project, and agricultural viability in the Study Area.

(v) The Application will include a discussion describing how the Project layout, and construction and operation of the Project will avoid or otherwise minimize impacts, to the maximum extent practicable, to natural resources and existing land uses including, without limitation, Prime Farmland, Prime Farmland if Drained, and Farmland of State Importance, including a discussion as to why it was not possible to avoid the Prime Farmland, Prime Farmland if Drained, and Farmland of State Importance designated areas, 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, as applicable.

3.05 Electric Systems Effects (Exhibit 5)

A System Reliability Impact Study (SRIS) has been prepared for the Project by the New York Independent System Operator (NYISO). The SRIS analyzes expected and base case flows on the system provided by the NYISO under normal, peak, and emergency conditions and the effects on stability of the interconnection. Additional technical analyses, including thermal, voltage, short circuit, and stability were completed to evaluate the impact of interconnection. The SRIS was approved by the NYISO Operating Committee (OC) and Transmission Planning Advisory Subcommittee (TPAS). The Project has entered Class Year 2019 and is in the process of finalizing the Facility Studies. The SRIS will be included as an appendix to the Application, filed separately with a request for confidentiality in accordance with the NYISO requirements as the SRIS contains Critical Energy Infrastructure Information.

A more detailed description of Facility impacts on transmission system reliability in New York will be provided in the Application.

Applicable Engineering Codes and Standards, Guidelines, and Practices

The Project and interconnection will be designed in accordance with applicable standards, codes, and guidelines including but not limited to the following:

- RUS Bulletin 1724E-200,
- American Concrete Institute (ACI),
- American National Standards Institute (ANSI),
- American Society of Civil Engineers (ASCE),
- American Society for Testing and Materials (ASTM),
- Building Code of New York,
- Institute of Electrical and Electronic Engineers (IEEE),
- National Electric Code (NEC),
- National Electric Manufacturers Association (NEMA),

- National Electrical Safety Code (NESC),
- National Fire Protection Association (NFPA),
- North American Electric Reliability Council (NERC),
- Northeast Power Coordinating Council, Inc. (NPCC),
- New York State Reliability Council (NYSRC),
- Occupational Safety and Health Administrator (OSHA), and
- Underwriters Laboratories (UL).

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

Maintenance, Management, and Procedures

Commissioning will commence following completion of Project construction, including interconnections, and confirmation from the NYISO to accept transmission of power to the New York grid. Commissioning will involve testing and inspection of the Project's electrical, mechanical, and communication systems.

The Project will follow industry standard practices for operation and maintenance, and will have a local on-call technician who may respond to Project requests quickly, as necessary. Should the Project undergo an emergency situation where operating levels are abnormal, the operating equipment will be automatically and immediately shut down.

Prior to the start of construction, the Project construction staff will prepare a comprehensive Emergency Response Plan (ERP) that will include:

- Contingencies that would constitute a safety or security emergency may include, but are not limited to:
    - Medical emergency;
    - Property damage;
    - Fire;
    - Chemical release or spill; and

    - Inclement weather/lightening.
- For each contingency identified, the ERP will include the following:
    - Emergency response measures;
    - Site clearance and control measures, if applicable; and
    - Agency notification procedures, as required by permits and regulations.

O&M of the Project will be detailed further in the Project's maintenance and management plans, procedures, and criteria to be included in the Application. These documents will address routine inspection and maintenance and vegetation management. Routine inspections will be completed by local O&M personnel for the solar arrays, access roads, revegetation areas, collection lines, and collection substation as necessary. An O&M schedule will be prepared to inspect the Facility's solar arrays and associated components. Inspections will be conducted according to the O&M schedule and noteworthy observations will be recorded. O&M schedule specifics are currently being developed to identify the frequency of routine activities, inspections, and maintenance intended to prevent dangerous conditions from occurring, and to ensure safe, reliable operation at the Facility. The O&M schedule and inspection and maintenance activities will be developed in accordance with the manufacturer's recommendations for Facility equipment. O&M personnel will have access to any manuals or other documentation provided by the manufacturer(s) at the Project Area to reference while conducting O&M activities or troubleshooting.

In addition to on-site O&M, an O&M Contractor will maintain a remote operations center with 24-hour staffing and monitoring to comply with NERC and NYISO requirements. Regularly scheduled maintenance and emergency maintenance activities on-site will be conducted by local subcontractors either directly through Hecate or via a third-party O&M Contractor.

The Project O&M procedures will include routine monitoring services such as solar component and ancillary structure monitoring, environmental monitoring, quality control and quality assurance, technical training, and inspection of access/service road conditions. Additional unscheduled maintenance will be conducted as determined necessary for the solar arrays and associated components, access/service roads, ancillary structures, the collection substation, interconnection facilities (inclusive of a potential energy storage system). As NYSEG owns and operates the Craryville 115 kV substation and associated Craryville-Klinekill and Churchtown-Craryville 115 kV transmission lines, NYSEG will address related maintenance and conduct inspections relating to the substation. Inspections will include monitoring of environmental conditions and evaluation to determine the effectiveness of corrective actions and restoration

activities. Monitoring and evaluation will be conducted until site restorations meet or exceed expectations. Periodic environmental audits will also be completed, approximately every three years, to ensure compliance with regulatory and permit conditions. Any findings deemed not compliant will be resolved by operating staff, and measures implemented to correct non-compliance will be recorded.

As previously mentioned, the Facility may comprise of some overhead collection lines and in these instances the Applicant will defer to best management practices, previously accepted by the Siting Board and/or the PSC, to control vegetation. Vegetation control will be pertinent to avoid damage to the lines and ensure safe transmission. As such, the Applicant will prepare a Vegetation Management Plan to include vegetation management practices to employ for overhead collection line areas in addition to best practices at other Project component locations. The Vegetation Management Plan will include an inspection and treatment schedule and various methods to avoid impacts from occurring outside the Project Area.

Proposed Exhibit 5 Contents

The Applicant proposes to collect, evaluate, and provide the following information to support and prepare Exhibit 5 of the Application in accordance with 16 NYCRR § 1001.5.

(a) An SRIS, performed in accordance with the open access transmission tariff of the New York State Independent System Operator (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 interconnection facilities (inclusive of a potential energy storage system), as well as other system upgrades and attachment facilities 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 Project.

(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, including consideration of the Uniform Fire Prevention and Building Code (Uniform Code) and State Energy Conservation Construction Code (Energy Code);

(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 the Applicant anticipates owning and operating the proposed collection substation, and no ownership transfer will occur with NYSEG, a description of substation facilities to be transferred will not be included as part of the Application.

(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, collection system, 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 within the fence line, 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) if any are identified around the collection substation, specifications for clearances, inspection and treatment schedules, and environmental controls to avoid off-site effects. The Application will address vegetation management throughout the Project Area, including PV racking and panels, fence line, access roads, etc.

(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 black start capabilities; therefore, a description of the Project's black start capabilities is not applicable and will not be included in the Application.

(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 NYSDPS, NYISO, and the local transmission owner.

(o) A log form indicating the proposed maintenance and inspection schedule for the proposed collection substation will be included in the Application to the extent available at the time the Application is filed.

3.06 Wind Power Facilities (Exhibit 6)

This requirement is not applicable to the Project, as there are no wind power facilities included in the Project.

3.07 Natural Gas Power Facilities (Exhibit 7)

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

3.08 Electric System Production Modeling (Exhibit 8)

Electric system production modeling for the Project will be developed using input data gathered in coordination with NYSDPS Staff, and computer-based modeling tools (GE MAPS, PROMOD, PVsyst, or similar). Output generated from this model will be used to estimate the amount of MWh the Project will generate on a monthly basis.

The Application will expand on solar technology's ability to generate power without the release of pollutants such as sulfur dioxide (SO_2), nitrogen oxides (NO_x), and carbon dioxide (CO_2) emissions into the atmosphere. The Application will also include a comparison of emissions within the local region with and without the Project. The Application will also include an evaluation of annual electricity prices for NYISO Zones within the Control Area of the proposed Project Area and New York State.

The capacity factor of the Project will be estimated for monthly, on peak, shoulder, and off-peak MW output capability factors. The capacity factor of the Project will also be estimated for average annual and monthly production in MWh. Annual production estimates for the Facility will be supplemented by production curves for an average year. The production curves will illustrate the Facilities' ability to distribute varying amounts of electricity throughout an average year and the associated impact on demand from existing power generation facilities.

Proposed Exhibit 8 Contents

The Applicant proposes to collect, evaluate, and provide the following information to support and prepare Exhibit 8 of the Application in accordance with 16 NYCRR § 1001.8:

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

(1) Estimated statewide and regional levels of SO_2, NO_X, and CO_2 emissions, both with and without the 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 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 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 provided in this Exhibit as necessary.

3.09 Applicable, Reasonable and Available Alternatives (Exhibit 9)

The Project will be sited and designed to maximize the amount of energy harvested from the sun and establish a reliable and efficient interconnection with the electric grid in Columbia County, New York. As such, the Project Area provides sufficient land for acquisition and development, and Project components will be arranged to allow for effective interconnection to NYSEG's existing Craryville 115 kV substation. The Project will contribute to the combined efforts made to achieve goals set forth in New York State's SEP, CES, the CL&CPA, and other policies established to reduce the rate of climate change and improve the number of renewable energy technologies participating in power generation within New York State. The Application will include an identification, if any, of applicable, reasonable, and available alternative locations for the Project. The alternative discussion will only evaluate land under the Applicant's control, via option, lease, or ownership, in accordance with 16 NYCRR § 1001.9(a).

The Applicant has executed a contract with NYSDERA to sell RECs generated by the Project. As such, the objective of the Project is to construct a solar energy generating facility that is capable of producing 60 MW of renewable energy at the Project Area.

The Project Area was selected based on technical and economic factors, including its compatibility with favorable land for commercial-scale solar energy production. Other considerations during Project Area siting included availability of the solar resource, willingness of landowners with available land, ease of access to the Project Area, ability to reduce unnecessary impacts, proximity to the electric transmission grid, and available capacity to justify interconnection. Other factors included compatible land use, topography, and avoidance of areas considered of high statewide significance or environmental sensitivity.

Project siting has not yet been finalized. Sensitive resource studies and coordination with Project stakeholders will continue throughout the Article 10 process to gain additional information about the Project Area and establish a final layout for the Project. A preliminary Project layout will be provided in the Application. The Application will also 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 generation technologies, such as wind and natural gas, other sources such as transmission or demand reducing alternatives are not technologies that are permitted under the terms of the NYSERDA REC contract and therefore will not be considered as an alternative technology.

Proposed Exhibit 9 Contents

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

The Applicant proposes to collect, evaluate, and provide the following information to support and prepare Exhibit 9 of the Application in accordance with 16 NYCRR § 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 Project, if any, will be limited to sites owned by or 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 impacts;

(5) Environmental impacts, including but not necessarily limited to an assessment of climate change impacts (whether proposed energy use contributes to global temperature increase) potential wildlife habitat, wetland, stream, and agricultural resource impacts;

(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 Project at the primary proposed location including applicable, reasonable, and available alternatives regarding:

(1) General arrangement and design;

(i) consideration of arrangements/design options that would enable some continued agricultural use of the Project Area;

(ii) consideration of alternative sites, designs, or arrangements that would avoid or minimize impacts to wildlife and wildlife habitat, to the maximum extent practicable, including but not limited to habitat fragmentation, disturbance and loss, and the displacement of wildlife from preferred habitat;

(iii) arrangements that would avoid or minimize impacts to waterbodies, wetlands, and streams, to the maximum extent practicable;

(iv) arrangement of inverters away from site property lines;

(v) consideration of alternative perimeter fencing designs that would minimize, to the maximum extent practicable, contrasts with adjacent land uses and visual character; and

(vi) alternative design and arrangement options for accommodating existing or participating landowner, planned, alternative agricultural production projects of all or parts of the Project Area, to the extent practicable.

(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 publicly known planned additions, withdrawals, or other capacity, transmission or demand reduction changes to the electric system that would reasonably affect the Project.

(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 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 Project, 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 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)

The New York State Energy Planning Board (NYSEPB) adopted a SEP on June 25, 2015. The SEP compliments the objectives outlined in New York's Reforming Energy Vision (REV) initiative to reduce greenhouse gases and stabilize the cost of energy. The Project supports the following statement from the 2015 REV Order, "A significant increase in the penetration of renewable resources is essential to meeting our objectives, State goals and proposed Federal requirements." The Project is consistent with the five Guiding Principles of New York's REV:

(1) ***Market Transformation:*** With each new large renewable energy project, the local and regional supply chain is strengthened and expanded. The Project will support the economy by providing temporary and permanent job opportunities as well and direct and indirect spending and create demand for trained solar technicians.

(2) ***Community Engagement:*** The Applicant is committed to communication with local and State stakeholders (as described in the PIP Plan).

(3) ***Private Sector Investment:*** The Project involves significant capital investment for development by the Applicant.

(4) ***Innovation and Technology:*** The Applicant will select Project components and equipment supported by the industry and known to be reliable and efficient.

(5) ***Customer Value and Choice:*** Providing the electric grid with solar powered electricity provides consumers the opportunity to purchase and use a more environmentally friendly energy (NYSEPB, 2015).

The SEP was amended in 2020 to include the renewables mandates of the CL&CPA, which require 70% of energy consumed in the State must be from carbon-free generating sources by 2030 and 100% by 2040. The Project will contribute to additional initiatives, goals, and targets of the SEP, CES adopted by the PSC, and the CL&CPA. The CES is consistent with the objectives of the amended SEP, and as part of the implementation NYSERDA conducts competitive solicitations for renewable energy projects. The Project has executed a contract with NYSERDA for the purchase of its RECs in a recent solicitation, and will increase the State's renewables penetration. Accordingly, the construction and operation of the Project is consistent with these State policies.

Additionally, the Project more directly supports New York State's more recently enacted Climate Leadership and Community Protection Act which enforces Governor Cuomo's goal advocating for.

The Project will also increase fuel diversity within New York by increasing the amount of energy produced by solar generation technologies. Currently, New York State's energy supply comes from a variety of fuel sources including natural gas, hydroelectric, nuclear, wind, solar, oil, and coal. As noted above, the Project is consistent with New York's SEP and renewables policies established to promote energy produced by renewable generation technologies. Renewable technologies, including the Project, provide economic benefits in line with the goals of the SEP such as job opportunities within the local community, stable electric pricing, and reduced greenhouse gas emissions.

Proposed Exhibit 10 Contents

The Applicant proposes to collect, evaluate, and provide the following information to support and prepare Exhibit 10 of the Application in accordance with 16 NYCRR § 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 SEP, the CES, the 2019 CL&CPA, and any publicly available draft new SEP including consideration of the information required by subdivisions (b) through (i) of § 1001.10.

(b) A description of the impact the Project would have on reliability in the state based upon the results of the SRIS.

(c) A description of the impact the Project would have on fuel diversity in the State.

(d) A description of the impact the Project would have on regional requirements for capacity.

(e) A description of the impact the Project would have on electric transmission constraints.

(f) The 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 Project would have in relation to any other energy policy or long-range energy planning objective or strategy contained in the most recent SEP.

(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 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, to the maximum extent practicable, the public health and environmental impacts related to climate change.

3.11 Preliminary Design Drawings (Exhibit 11)

Drawings prepared by a professional engineer, landscape architect, or architect, licensed in the State of New York, using computer software equivalent or similar to AutoCAD or MicroStation will be included in the Application. The drawings will be labeled as "preliminary" and/or "not for construction purposes" and the preparer's name will be clearly printed on each drawing. Common engineering scales will be used for plotting full-size and half-size drawing sets, where required. Copies of each drawings set, as well as the AutoCAD files, will be provided to the NYSDPS at appropriate scaling and in accordance with the Article 10 regulations.

Per 16 NYCRR § 1001.11, the Applicant will prepare a site plan, construction operations plan, grading and erosion and control plans, a landscaping plan, and a lighting plan. Additionally, the Application will include typicals of underground and overhead facilities, as applicable. The Applicant will obtain coverage under the NYDEC's State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001; or SPDES General Permit in effect at the time of construction) and will comply with the requirements set forth therein.

As noted above, a lighting plan will be provided for these Project locations and will provide detail regarding the type of lighting, location, and height of the proposed exterior light fixtures. The lighting plan will include measures to minimize light trespass and any other unnecessary impacts on the surrounding areas beyond the Project Area boundaries. Manufacturer cut sheets will be provided for the various light fixture types. Lighting proposed for the Project will be kept at the minimum level necessary to ensure the safety of on-site personnel (e.g., down-shielding of light fixtures) and reduce potential impacts beyond the immediate work areas within the Project. Additionally, lighting used for maintenance activities will be activated manually.

The Application will include a detailed list of engineering codes, standards, guidelines, and practices the Applicant will adhere to during all stages of the Project (pre-construction through decommissioning). A preliminary list is provided below and will be updated in the Application, as necessary:

- ACI
- ANSI

- IEEE
- Insulated Cable Engineers Association (ICEA)
- American Society of Mechanical Engineers (ASME)
- NEC
- NESC
- National Electric Manufacturers Association (NEMA)
- NFPA
- Uniform Building Code (UBC)
- UL
- American Iron and Steel Institute
- American Institute of Steel Construction
- International Building Code (IBC)
- AASHTO Standard for Aggregates
- ASCE 7-10 Minimum Design Loads for Buildings and Other Structures
- Federal OSHA 1910.269 Training
- American Concrete Institute (ACI)
- Building Code of New York State
- Concrete Reinforcing Steel Institute
- Illuminating Engineering Society of North America
- Instrument Society of America

- Energy Code

Proposed Exhibit 11 Contents

The Applicant proposes to collect, evaluate, and provide the following information to support and prepare Exhibit 11 of the Application in accordance with 16 NYCRR § 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 on-site facilities and ancillary features, as applicable. This plan will also include the number of circuits per proposed collection system route, the existing substation and Craryville-Klinekill and Churchtown-Craryville 115 kV transmission lines and any known existing transmission utilities and associated ROWs within the Project Area as well as laydown, staging, and equipment storage areas with associated access, setbacks, and parking. Additional drawings shall be included depicting the layout of all off-site facilities and ancillary features, if applicable. There are currently no off-site facilities or sidewalks proposed. Site plans will also provide indication of property lines. Four full size copies of the preliminary design drawing set (utilizing a common engineering scale) will be provided to NYSDPS at the time of Application submittal, as applicable. Additionally, the Applicant will provide a Flash Drive Memory Stick containing AutoCAD or MicroStation drawing files, as applicable. The Applicant will incorporate and apply NYSDPS staff guidelines regarding drawings size to maps and drawings as applicable and appropriate unless otherwise specified during stipulations. The following specific features will be included on the site plans and will be submitted with the Application:

(1) Proposed solar panels and associated mounting features (any concrete pads, foundations, etc.) and inverters and any meteorological stations;

(2) Access road travel lanes, including estimated linear distances;

(3) Proposed grading (temporary grading for construction purposes and permanent contours for final grading);

(4) Electric collection lines, including linear distances, and number of circuits per proposed electric cable route; overhead and underground cable routes will be differentiated with specific line-types;

(5) The existing electric transmission line (which the Project will interconnect to) and any known existing utilities (including pipelines) and associated rights-of-way within the Project Area;

(6) Approximate limits of disturbance for all Project components (panels, access roads, buildings, electric lines, substations, O&M facilities, etc.);

(7) Clearing limits for all Project components (panels, substation, POI, access roads, buildings, electric lines, etc.);

(8) Indication of off-site permanent ROW and road crossings for all electric cable installations;

(9) Outline of collection and interconnection switchyard/substations, including access driveway, setbacks, and fence line;

(10) Proposed locations of electric cable installations for crossing of streams, waterbodies, roads, etc. and, where proposed, any proposed locations of such crossings that will utilize trenchless methods of installation, including the approximate laydown area (outline of approximate work space needed) and approximate trenchless installation distances;

(11) Any proposed energy storage systems;

(12) Laydown, staging, and equipment storage areas including designated parking areas;

(13) O&M facilities (if applicable) including access, parking areas, site maintenance shops or equipment storage areas, and the location of any proposed water supply and septic system(s), if applicable;

(14) Fencing and gates, including clearing associated with fencing;

(15) Property lines and zoning setbacks;

(16) Existing utility equipment locations and easement limits of those existing locations, including electric transmission and distribution lines, cable and telecommunication lines, and other features as applicable (gas pipelines, municipal water, municipal sewer lines, based upon publicly available information);

(17) Site security features, including perimeter fencing; and

(18) Planted screening locations, if applicable.

(b) A construction operations plan indicating all 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, location, and elevation of exterior lighting fixtures and indicating measures to be taken to prevent unnecessary light trespass beyond the Project property line. Representative manufacturer cut sheets for lighting fixtures will be included in the Application.

(f) Architectural drawings, as applicable, including structure arrangements and exterior elevations for all structures (including collection substation and interconnection equipment, site security features, and any O&M or other operational support buildings and structures, including retaining walls, and fences), indicating the length, width, height, material of construction, color, and finish of all buildings, structures, and fixed equipment and the type(s) of site perimeter fencing (including access gate(s)) to be installed extensively around the Project.

(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.

(1) Plan and sections for all proposed layout schemes concerning underground collection line installations, as applicable, including:

(i) Single and multiple-circuit layouts;

(ii) Co-located installations with dimensions of proposed depth and level of cover;

(iii) Separation requirements between circuits;

(iv) Clearing width limits for construction; and

(v) Operation of the Project, limits of disturbance, and required permanent ROW.

(2) If overhead collection lines are deemed necessary, the following applicable information will be included on site plan drawings submitted with the Application:

(i) Elevation plans for overhead facilities (collection and transmission lines) including height above grade, structure layouts, clearing width limits for construction and operation of the Project, and permanent ROW widths;

(ii) Average span lengths for each proposed layout; and

(iii) Structure separation requirements (for installations containing more than one pole, etc.) for all single and multiple-circuit layouts.

(3) Foundations (piers, etc., including dimensions) to be used for solar panel installations;

(4) A circuit map indicating overhead and underground installations, and number of required circuits proposed per collection line run;

(5) Typical details associated with trenchless installations, including typical staging areas, construction machinery arrangements, and bore pits;

(6) Elevation plans for any proposed energy storage system(s), including length, width, and height details, and

(7) Technical data sheets associated with solar panels to be used for this Project.

(h) For interconnection facilities (inclusive of a potential energy storage system), 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 (including the NESC), guidelines and practices with which the Applicant intends to conform with when planning, designing, constructing, operating and maintaining the Project, electric collection system, collection substation, and associated structures, as applicable. These standards will include those of the ACI and the Uniform Fire Prevention and Building Code (Uniform Code) and State Energy Conservation Construction Code (Energy Code) applicable to the Project.

(j) All wetland boundaries will be included in the Application on maps, site plans, and shapefiles. Interpolated and adjacent area boundaries will be differentiated from field-delineated boundaries when displayed on maps, site plans, and shapefiles.

(k) If energy storage systems are proposed for the Project, Exhibit 11(j) shall also include:

(1) Code references and descriptions regarding installation and operation of the system; and

(2) A summary of correspondence with the local fire department regarding installation and operation of any electric energy storage system(s), including energy storage unit(s).

(3) Correspondence with the local fire department specific to site plans and details of any proposed electrical energy storage systems.

(l) Site plan drawings, at a scale of 1":100' (or similar) will depict all Project components; proposed grade changes; the limits of ground disturbance and vegetative clearing; and all field-delineated wetlands, predicted wetland boundaries and State-regulated 100-foot adjacent areas and State-regulated wetlands located within 100 feet of all areas to be disturbed by construction.

3.12 Construction (Exhibit 12)

The Applicant will prepare a preliminary Quality Assurance and Quality Control Plan to outline monitoring qualifications, roles, and responsibilities for the Project. The Application will also include a statement indicating that the Applicant will meet the requirements for the protection of underground facilities contained in PSL § 119-b and implemented by 16 NYCRR Part 753, as well as the pole numbering and marking requirements implemented by 16 NYCRR Part 217, if determined to be required.

Construction Activities

The Project will require a variety of activities to be completed prior to the proposed commercial operation date. These pre-construction, construction, and post-construction activities may include, but should not be limited to:

- Time to engineer and design the Project;
- Specify and procure equipment;
- Ordering of all necessary components such as the solar photovoltaic panels, racking, mounting posts, and transformers;
- Property and location survey completion for structures and roadways;
- Soil borings, testing, and analysis for proper foundation design and materials;
- Installation of erosion and sediment control measures required pursuant to the SPDES General Permit;
- Complete construction of access roads to be used for construction and maintenance;
- Construction of collection lines (mostly underground and, if necessary, aboveground);
- Design and construction of the collection substation;
- Design and construction of battery storage systems (optional);
- Installation of solar array mounting posts;

- Solar panel placement and setting;
- Commissioning and acceptance testing of Project; and
- Commencement of commercial operation.

Access roads will be built to support the size and weight for component delivery and maintenance by light, medium, and heavy-duty construction vehicles. The number and location of access roads will be heavily dependent on the placement of solar panels. Different levels of lighting will be used to accommodate construction personnel and their associated vehicles or equipment along the proposed Project access routes. The Application will include any mitigation measures required to reduce potential impacts to the environment as a result of the proposed access roads. Final access road locations and detailed designs will be presented in the Compliance Filing following review and acceptance of the Certificate Conditions.

Construction Management

The Applicant will select an Engineering, Procurement, and Construction (EPC) contractor to construct the Project. The Applicant's construction managers will monitor the EPC contractor(s) and ensure strict compliance with the EPC contract and construction permits. The EPC contractor will be responsible for all the activities on the site and the procurement of equipment and labor.

The EPC contractor(s) will also serve as the primary contact and interface for subcontractor coordination. The EPC contactor(s) will be responsible for installation and construction of the proposed solar arrays, access roads, collection lines, collection substation, and interconnection facilities (inclusive of a potential energy storage system). The contractor(s) will also order, manage, and distribute construction materials and equipment inventory. The EPC contractor will appoint an on-site construction manager who will directly supervise construction of the Project and relay other notable items related to ongoing communication with local officials.

The EPC construction team will be on-site to manage receipt of materials purchased, construction activities, quality control, testing, and start-up. The Applicant's construction management team will maintain effective communication throughout construction.

The Project construction sequence will occur according to those outlined in the Certificate requirements, including any approved best management practices (BMP) or requirements of the SPDES GP-0-20-001 (or general permit in effect at the time of construction) to avoid and/or

minimize impacts to sensitive resources, including wetlands, waterbodies, and flood zones, to the greatest extent practicable. The Application will provide further detail and description regarding BMPs and other avoidance and mitigation measures proposed for the Project.

To ensure a smooth transition and common understanding among Project personnel, O&M personnel will become involved in and work with the construction manager as early as the construction phase through operation.

Civil Works

Construction of the Project will result in the need for civil works and physical improvements to the land. Civil work improvements may include the following:

- Clearing and grading within the proposed solar array locations, as determined necessary;
- Installation of underground (and potentially overhead, if required) collection lines to connect the solar arrays to the Project collection substation;
- Installation of any Project Area fencing and security; and
- Restoration and re-vegetation of disturbed land following completion of construction activity.

The Application will describe any potential interference with and include on Project mapping for any existing utilities including gas, electric, and communications infrastructure. There are no natural gas transmission pipelines that intersect the Project Area or Study Area. There are four electric transmission lines (owned by Avangrid and operated by NYSEG) that traverse the north central portion of the Project Area. Three are routed in an east-west direction and one is routed in a north-south direction.

Commissioning

After the construction phase, the Project will be commissioned. Prior to final commissioning, detailed inspection and testing procedures will be completed. Each Project component will undergo final inspection and testing including the communication system, high and medium voltage collection system, and supervisory control and data acquisition (SCADA) system.

Complaint Resolution

The Applicant will continue to address any public comments, concerns, or complaints brought forth throughout the construction and operation phases of the Project. Any public comments, concerns, or complaints will be formally recorded according to the Complaint Resolution Plan., which will be included as an appendix to the Application. The Complaint Resolution Plan will be made publicly available and will describe how public comments and concerns should be received, the timeframe to respond to complaints, next steps for unresolvable complaints, and the methodology for recording and tracking complaints. The Applicant will strive to respond to all comments, particularly those received from residents and businesses, efficiently and effectively.

Proposed Exhibit 12 Contents

The Applicant proposes to collect, evaluate, and provide the following information to support and prepare Exhibit 12 of the Application in accordance with 16 NYCRR § 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 Project Facilities 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. The Applicant will consult with the owner of the existing

transmission lines that traverse the Project Area to request specific information, and the following will be provided, to the extent available:

(1) A review of publicly recorded easements associated with the transmission lines;

(2) An indication of any publicly recorded restrictions associated with the easement for crossing and setbacks;

(3) Results of consultations with transmission line owners to request specific information (if any) that may provide value to plan to reduce or avoid potential interference at Project component locations that are located nearby existing utilities or that directly cross an existing utility;

(4) To the extent provided upon written request of the Applicant, utility owner criteria for installations of Project components near the existing transmission line;

(5) Descriptions of any potential studies required or recommended by the transmission line owners (along with an indication of timing of the studies);

(6) Specific separation requirements or recommendations regarding specific Project components (collection lines, panels, etc.) in relation to the existing transmission lines;

(7) Descriptions and typical details of any required or recommended protective features to be placed at crossings of or nearby the existing transmission lines; and

(8) Communications and coordination requirements of the transmission lines' owner-operators for construction within the transmission line right-of-way; and

(d) The Applicant will prepare a formal Complaint Resolution Plan, including specification of commitments for addressing public complaints, and procedures for dispute resolution during Project construction and operation, and reporting. The Complaint Resolution Plan shall describe how and when the public will be notified of the complaint procedures, including the methods by which complaints will be accepted (e.g., toll-free lines, website, email) and procedures for handling verbal complaints received during construction. The plan shall identify and include any procedures or protocols that may be unique to each phase of the Project (e.g., construction, operation, decommissioning) or complaint type

(e.g., noise), timeframes for responding to complaints and actions the Applicant will take if the complaint remains unresolved after all steps are followed. The Application will include a plan for maintaining a complaint log listing all complaints and resolutions during construction and operation of the Project and will include a procedure for review and transmittal of the complaint log to NYSDPS staff.

(e) A statement regarding how and when the Applicant will communicate with stakeholders about construction activities, schedule and applicable safety and security measures.

3.13 Real Property (Exhibit 13)

The Applicant has entered into option-to-lease agreements or is in final negotiations for land parcels where Project components are likely to be sited for the Project. Documentation demonstrating the Applicant's interests in the Project Area, as available, will be provided in the Application and redacted as necessary to protect confidential information. The Application will also contain a statement demonstrating that the Applicant has or will obtain the necessary rights to proceed with the Project.

The Application will include a Project facilities map showing all property boundaries, owner and tax map information, easements, public and private roads, and zoning or related land designations.

Proposed Exhibit 13 Contents

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 final Project Area, created by a licensed surveyor, 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 (inclusive of a potential energy storage system) 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 easement or 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 easement or leasehold interest, or can obtain such title or leasehold interest. The Application will include a map and a table to indicate property rights under the Applicant's control or lease option for Project development.

(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 Applicant will provide an estimate of total capital costs within the Application for review by the Siting Board, with certain information being proprietary and provided under separate cover with a request to be treated as trade secret under applicable regulations.

Cost estimates will be prepared for the development, permitting and engineering of the project and the cost of solar arrays and other Project components including interconnection to the grid. Cost estimates will be prepared based on relevant industry experience and estimated vendor pricing.

Proposed Exhibit 14 Contents

The Applicant proposes to collect, evaluate, and provide the following information to support and prepare Exhibit 14 of the Application in accordance with 16 NYCRR § 1001.14:

(a) A detailed estimate, as explained in (b) below, of the total capital costs of the 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 / confidential protection for this information pursuant to Public Officers Law (POL) § 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 cost estimates prepared by an engineering firm experienced in the design and cost of utility scale solar facilities.

(c) Upon the demand of any party or of the NYSDPS, 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 and/or confidential commercial information. Therefore, the Applicant will seek the requisite trade secret and/or confidential commercial information protection for this information pursuant to POL § 87(2)(d) and 16 NYCRR § 6-1.3.

3.15 Public Health and Safety (Exhibit 15)

As solar energy technology produces emissions-free electricity, the Project will not create public health or safety concerns. Solar energy generation will not require water consumption or wastewater discharges, nor will the Project result in any negative impacts to air quality. The technology selected for the Project does not emit gaseous, liquid, or solid wastes, and will therefore not require any associated emission controls. As indicated above, and as will be discussed in the Application, the Project is consistent with the SEP, CES, and CL&CPA.

As previously mentioned, the Project will not result in impacts to air quality and the Project has the potential to displace air emissions from fossil fuel plants connected to the grid. Air emissions that result from Project will be minimal as they are limited to construction activities. The Project will also produce minimal solid waste from construction materials including plastic, wood, cardboard, and metal-packing materials, construction scrap, waste concrete truck washout, and general refuse. All waste materials generated will be properly disposed of, and in accordance with applicable regulations, at a nearby landfill Facility or recycled. Exhibit 15 of the Application will specify local solid waste collection services, landfills, or transfer stations within the Project Area that may serve the Project during construction.

In accordance with the requirements of 16 NYCRR § 1001.15, the Application will include a summary of an evaluation completed to determine significant impacts the Project may have on the environment, and public health and safety. The Application will also present a plan to mitigate and monitor activities to be employed should any potential impacts be identified.

No adverse impacts to public or private water supplies and no water withdrawal is anticipated as part of the Project. The Applicant will utilize BMPs, including erosion and sediment control measures (e.g., silt fence, hay bales) further described in the Preliminary Stormwater Pollution Prevention Plan (SWPPP) to be included as part of the Application, during construction to avoid stormwater runoff to wetlands or waterbodies.

The Application will include mapping, primary contact information, and a distance analysis for emergency response resources and facilities including police, fire, and emergency medical response within the Project Area. Emergency response services within the local communities for the Project Area and Study Area include:

- Copake Fire Department;

- Copake Fire District;
- Hillsdale Fire Company;
- Craryville Fire District;
- Taghkanic Volunteer Fire Company;
- Claverack Fire Company;
- Copake Community Rescue Squad;
- Columbia County Sheriff's Office;
- Columbia County Emergency Management;
- Columbia County Emergency Medical Services;
- Columbia County Fire Coordinator and;
- New York State Police Troop K.

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.

Proposed Exhibit 15 Contents

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. Studies referenced shall identify the author and date thereof. This will also include consideration of wood waste generated during site clearing, including stumps and slash, and proposed methods to manage these materials.

(b) The anticipated volumes of such wastes to be released to the environment during construction and under an operating condition of the Project. Thin-film solar cell technology is not being proposed. A manufacturer's specification sheet for the typical type of crystalline silicon solar panel to be used will be provided.

(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, landslide hazard areas, and areas of geologic, geomorphic, or hydrologic hazard; dams, bridges, and related infrastructure; explosive or flammable materials transportation or storage facilities; contaminated sites; major natural gas facilities; 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 measured for monitoring and measuring of 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.

(m) In addition to the requirements outlined in subdivisions (a) through (l) above, the Applicant will perform receptor surveys using publicly available information and field visits to determine full and part-time residences in the vicinity of the Project Area property boundaries to document whether there will be operational sound impacts to such residences as a result of the Project that exceed any applicable state or local standards.

(n) A glare analysis will be prepared as described in Section 3.24 of this document.

3.16 Pollution Control Facilities (Exhibit 16)

This requirement is not applicable to the Project as there will be no pollutants generated on any ongoing basis, nor will any pollution control facilities or emergency generator be required for operation of the Project.

3.17 Air Emissions (Exhibit 17)

Solar energy technologies generate electricity without the release of harmful pollutants into the atmosphere. Project operation will not result in greenhouse gas emissions or other air pollutants. Additionally, no emergency generator will be required for the Project.

Compliance with Applicable Federal, State, and Local Regulatory Requirements

As no greenhouse gas emissions or other air pollutants will be released during Project operation, the Project is not subject to the Environmental Protection Agency (EPA) New Source Performance Standards that regulate air emissions from the new stationary sources and therefore will not require any air pollution control permits under the Clean Air Act or New York State law or regulation.

The Project is also not subject to the requirements under the 1984 State Acid Deposition Control Act as Project operation will not result in the release of SO_2 or NO_X. The 1984 State Acid Deposition Control Act requires the reduction of SO_2 emissions from existing sources and NO_X emission controls on new sources in New York State.

Emissions by Combustion Sources Table

As the Project does not require the combustions of fuel and will not result in the release of pollutants into the atmosphere, the table required per 16 NYCCR § 1001.17(c) is not applicable to the Project and will therefore not be included in the Application.

Potential Impacts to Ambient Air Quality

The Project is not only capable of producing electricity with zero emissions but also has the potential to offset air emissions generated by other fossil fuel energy sources. Therefore, the Project is anticipated to have a positive impact on air quality. As such, the Project is not subject to the requirements of 16 NYCRR § 1001.17(d) pertaining to the release of pollutant emissions and therefore this discussion will not be included in the Application.

The Application will include a discussion of potential, temporary impacts to ambient air quality resulting from engine exhaust and fugitive dust from vehicles and equipment during construction of the Project. As the construction phase of the Project will last for approximately nine to 12

months, no significant impacts are anticipated to occur to local air quality. Additionally, air quality impacts will be minimized to the maximum extent practicable using BMP's such as:

- Ultra-low sulfur diesel fuel in all diesel engines;
- Proper maintenance of manufacturer-supplied air pollution control equipment;
- Minimization of diesel idling time whenever possible; and
- Dust and erosion control measures consistent with the NYSDEC's New York State Standards and Specifications for Erosion and Sediment Control (e.g. spraying access roads with water as necessary) [NYSDEC, 2016].

Off-site Consequence Analysis for Ammonia Stored On-site

No ammonia will be stored on-site during construction or operation of the Project. Therefore, the off-site consequence analysis required by 16 NYCRR § 1001.17(e) is not applicable to the Project and will not be included in the Application.

Proposed Exhibit 17 Contents

The Applicant proposed to collect, evaluate, and provide the following information to support and prepare Exhibit 17 of the Application in accordance with § 1001.17:

Exhibit 17 of the Application will contain a discussion on potential 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)

The Application will include a preliminary safety plan that includes a safety tailboard form, construction safety plan, and an operations safety plan to ensure safety and security during construction and operation of the Project. This preliminary safety plan will identify the necessary precautions to take during survey design, layout, construction, and operation of the Project. Additionally, safety precautions are currently in place for development planning related activities such as environmental and cultural surveys, land surveys, micro-siting, etc.

Following receipt of a Certificate for the Project, the contractor selected to lead construction (i.e., EPC contractor) will prepare a site security plan for Project construction. Once the EPC Contractor is selected, a site security plan will be prepared and will be provided to the Siting Board as part of a Compliance Filing. Safety and security measures intended for construction may include, but will not be limited to, fencing of the construction laydown yard, locking gates to the laydown yard during off-work hours, and posting signs notifying the public of active construction sites. Additionally, a traffic management plan will be included in the Application to include traffic-related signs and road safety measures to ensure safe travel for the public and Project personnel. The traffic management plan will be developed in consultation with stakeholders within the Project Area and Study Area to incorporate their concerns and raise awareness of safety and security measures to be utilized during construction activities.

As a majority of construction will occur on private property, public access will be limited. Public safety controls will be employed to restrict access during construction and operation including design setbacks, security fencing, and locked access to the Project Area, the proposed collection substation, and interconnection facilities (inclusive of a potential energy storage system).

Exhibit 18 of the Application will include a discussion regarding the purpose, location, and intended use for lighting during construction and operation for Project equipment and other areas of the Project. Security lighting will be installed to ensure the safety and security of on-site construction personnel and reduce the potential for trespassing. Security lighting will be downward facing to reduce impacts to wildlife or other visual receptors. Manually activated lighting is proposed for areas where maintenance activities are anticipated to occur to minimize or avoid light at unnecessary times. Other surveillance and security control systems may be put in place for the Project.

The Project and any digital networks or communication systems proposed for the Project will comply with the NERC Critical Infrastructure Protection (CIP) standards. The Project's Security Operations Center will monitor the Project's firewalls and servers 24 hours a day, seven days a week and its employees will be required to complete an information security awareness training.

The Applicant will also develop an Emergency Response Plan (ERP) to identify potential safety or security emergencies, their associated responses, evacuation procedures (if determined necessary), and on-site safety controls (e.g. fire extinguishers and their locations). The preliminary ERP will be included in the Application.

Proposed Exhibit 18 Contents

The Applicant proposes to collect, evaluate, and provide the following information to support and prepare Exhibit 18 of the Application in accordance with 16 NYCRR § 1001.18:

(a) A preliminary plan for site security of the 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 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; Setback consideration with respect to wildlife and habitats are presented in Exhibit 22, and

(6) A description of a cyber-security program for the protection of digital computer and communication systems and networks that support the Project 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, 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 for each contingency;

(3) Evacuation control measures for each contingency; and

(4) Community notification procedures for each contingency. These procedures will include a detailed description of the stakeholders included in the communication/notification efforts, the timeframes for notification, and the planned communication methods (e.g., letter, doorhangers, email, text, telephone calls, etc.). Mandatory plans for how these communications will be tracked and reported in a log to NYSDPS Staff will be identified and discussed

(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) The Project 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 hazardous substance incident will be addressed in the Application. Relevant 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 ERP, which will be submitted with the Application.

(h) The ERP will outline the contingencies that would constitute a safety or security emergency, the appropriate response measures to be taken as a result of this emergency, any evacuation control measures that may be necessary, and the means by which the community will be notified of the emergency and any procedures that shall be followed.

(i) The Applicant will identify the first responders/emergency services that will be consulted during the development of the ERP and those identified will receive copies of the final site plan.

(j) The Application will address how the Applicant will provide information and training to the local emergency response organizations, including the Craryville and Copake Fire Departments and Columbia County Emergency Management Office, to instruct such entities on how to respond to emergencies that occur on, near, or as a result of the operation of the solar Project. The Columbia County Sheriff's Department, New York State Police Troop K, and NYS Division of Homeland Security and Emergency Services will be consulted to review the draft ERP and preliminary plans, and their input will be solicited.

3.19 Noise and Vibration (Exhibit 19)

A benefit of solar energy projects is that they generate electricity without the use of major sound emitting sources. Sound emitting sources associated with the operation of are limited to the inverters and transformer(s) associated with the collection substation and interconnection facilities, and battery storage units. The inverters are used to convert direct current (DC) into alternative 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 periods with sunlight. Sound from the battery storage units are expected to be low as they arise from a very small transformer and cooling of the storage units. Additionally, the proposed collection substation and interconnection facilities (inclusive of a potential energy storage system) 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 16 NYCRR § 1001.19, a pre-construction noise impact assessment 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 sound 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 of sound 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 assessment 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) and one with leaf-off (i.e., wintertime) conditions. Exhibit 19 will include a report summarizing the noise expert's assessment of the ambient noise environment, using the sound data collected on-site during the leaf-on and leaf-off monitoring periods. Ambient pre-construction noise monitoring locations will be

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

A map of the Project Area indicating the location of sensitive sound receptors in relation to the Project, including the collection substation and interconnection facilities (inclusive of a potential energy storage system), 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 be possible and aerial imagery cannot provide an obvious classification of a structure (i.e., residential vs. non-residential), the structure will be assumed as 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, 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 16 Hz may be calculated at the most potentially impacted and representative sensitive receptors if sound level data are 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} 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 five one-third octave band frequency analyzers will be used as sound monitors to record the frequency spectrum of the existing sound levels. At least six 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, the Applicant will be committed to addressing 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 quickly and resolve complaints in a timely manner.

Avoidance and Minimization Measures

Project component siting will be designed to minimize and/or avoid sound related impacts, to the maximum extent practicable, to potential sensitive sound receptors.

Proposed Exhibit 19 Contents

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 battery storage units, the proposed collection substation and 115 kV switching station. 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 16 NYCRR § 1001.19:

(a) A map of the Study Area in digital format showing the location of sensitive receptors within the 30 dBA noise contour or 1,500 feet of the Project Area, whichever is greater, in relation to the Project, related proposed facilities, ancillary equipment, collection substation, and 115 kV substation (to the extent the substation has a new noise source). 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 leaf off and leaf on and during day and night as a function of time and frequency (frequency data will include one-third octave bands from 10 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 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 one-third 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, and 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 measurement program will be conducted for a minimum of seven 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 five meters per second (11 miles per hour) at the sound microphone or portable weather station heights will be identified and also 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. New York State Mesonet data from the most representative station may be used to supplement the weather dataset for sound monitoring periods.

(c) An evaluation of future noise levels during construction of the 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 a 3-D computer propagation model. Information will include sound contours and predicted sound levels, including the loudest pieces of equipment for the different phases of construction. By its very nature, construction equipment typically moves around the site. The construction analysis will include a table indicating the actual distances from expected construction activity to the nearest 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. Sound levels and noise source characteristics will be based upon information provided by the manufacturer on components to be used or a similar product or piece of equipment, documentation of which will be included with the Application.

(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 set 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 dBA 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 Project, including but not limited to the arrays of panels (e.g., inverters, medium to low voltage transformers), battery storage units, proposed collection substation, 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 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 (Kt) in ANSI S12.9-2013/Part 3 Annex B, Section B.1, will be used to evaluate tones at the nearest five potentially impacted and representative noise receptors using spreadsheet calculations if one-third 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 under normal operations for one year. 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. 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. 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 (L50) under normal operations for one year. The median sound pressure level will likely 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 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) The Applicant will review applicable local codes and will provide a summary of applicable substantive noise standards from these codes. In addition, Exhibit 19 will include a summary of noise-modeling results 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 as used throughout the Application. 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 project noise and community complaint potential.

(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 will be provided.

(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 during periods of operation, will be provided.

(n) Specific modeling input parameters, assumptions, and any associated data used in sound propagation modeling and calculations will be included as an appendix to Exhibit 19 and shall fairly match the unique operational noise characteristics of the particular equipment

proposed for the Project. The Application will include noise source locations (including latitude/longitude coordinates plus elevation above sea level), evaluated participating and non-participating receptor locations (including latitude/longitude coordinates plus elevation above sea level); participant and non-participant boundary lines; and noise source sound level data, where available. These will be delivered directly to NYSDPS 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 (NYAC) 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 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 Project on cultural resources will be conducted and detailed in the Application with Phase IA and Phase IB (if required) archaeological survey reports and the historic architectural survey report included in the appropriate appendix.

The Phase IA study, conducted by Tetra Tech in 2019, included review of recorded archaeological sites and historic properties located within a one mile radius of the Project, a literature review, and a pedestrian reconnaissance of the Project Area to assess current conditions and archaeological potential (Jacoby, 2019). As no systematic field survey has 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 Project on cultural resources identified, as well as the results of both the consultation with the OPRHP, the Phase IA and Phase IB studies (if required), 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 commercial-scale solar arrays, access roads, buried (and possibly overhead) electric collection lines, and electrical interconnection facilities (inclusive of a potential energy storage system). 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), thereby precluding the need for archaeological survey.

Phase IA and Phase IB Archaeological Survey

Phase IA Archaeological Research

A Phase IA archaeological investigation was conducted by Tetra Tech, Inc. of the Shepherd's Run Solar Facility in 2019. The study included background research, a review of OPRHP site files and survey reports, and a pedestrian reconnaissance of the Project Area. The investigation identified areas of high, moderate, and low archaeological sensitivity within the then-current Project Area, which, at the time, was 718.7 acres.

As part of the preliminary Project review, an initial search of OPRHP records was conducted. Based on CRIS review, one previously recorded site (NYSM 8630) is located immediately adjacent to parcels included in the proposed Project Area. One previously recorded NYSM Area (NYSM Area 3113) and one previously recorded site (NYSM 8629) are located to the southwest within one mile of the Project area. Significant portions of the proposed Project Area are mapped within archaeologically sensitive areas. No archaeological field surveys have been conducted within or within one mile of the proposed Project Area.

Phase IA background research will continue review of site files and archives through 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 listings will also be examined.

Archaeological Sensitivity

The results of background research, project mapping, and USGS topographic maps will be examined to determine the archaeological sensitivity of the Project Area. The archaeological sensitivity of an area 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 archaeological sensitivity. Areas of high archaeological sensitivity 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 overhands. Areas of moderate archaeological sensitivity typically include relatively level uplands displaced from perennial water sources (greater than 100 meters), and low archaeological sensitivity 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 analysis of past and present land uses and soil information, summaries of previous cultural studies, listings of archaeological and historic sites in the surrounding area, research methods, a discussion of the archaeological sensitivity model and recommendations for Phase IB survey. 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 archaeological sensitivity maps. As necessary, the report will provide recommendations for Phase IB survey methods for review 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 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 APE during a Phase IB survey will be proposed, if determined to be necessary. For archaeological resources, the APE is defined as areas where ground disturbances may occur, inclusive of access roads, workspaces, collection lines, any proposed interconnection facilities (inclusive of a potential energy storage system), 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 archaeological sensitivity, 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 archaeological sensitivity defined field methods, the Applicant will examine between 5 and 10 percent of the areas identified as high and moderate archaeological sensitivity with a 5-meter STP interval. The locations of the smaller subset of close interval testing in high and moderate archaeological sensitivity areas will be based on suitable areas as determined in the field.

In areas of low archaeological sensitivity, 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 Guideline, all STPs will measures 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. Recovered artifacts will be bagged, labeled, and sent to the laboratory for processing and analysis. STPs will be backfilled after completion. All positive STPs will be recorded using a Trimble sub-meter accurate global-positioning system (GPS) unit and plotted on aerial photographs and Project maps.

Additional STPs (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 STPs or archaeological sites. Work will be conducted inside the Project APE. Archaeological surveys are not 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

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 (NYAC) Standards. 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 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 IB Survey Report

Following the completion of the Phase IB archaeological survey, a report following the OPRHP Guidelines will be prepared. The report will summarize the Phase IA research and detail the fieldwork methods and results of the Phase IB survey and provide recommendations. In support of the text, historical maps and photographs will be prepared to illustrate findings. Tables including the artifact inventory and shovel test 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 on the NRHP, or if Phase II studies (see below) would be required to determine site eligibility. A Draft Report will be produced and submitted to the OPRHP for preliminary review. Following review, TRC will make any necessary changes and a Final Report will be produced.

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. A Phase II study 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. The 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.

Both the environmental monitor and 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 and would consult with the OPRHP regarding site clearance.

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 Tribal Historic Preservation Office (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, 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. 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 Article 10 regulatory requirements, the Applicant will conduct a reconnaissance-level historic architectural resources 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 in the NRHP. For those properties that are listed, eligible, or recommended as eligible for NRHP listing, the Applicant will further investigate properties for potential adverse direct and indirect effects.

Agency Consultation and Definition of Study Area and APE

The Applicant will consult with OPRHP concerning the delineation of the Study Area and the APE for direct and indirect effects, and proposed survey methodology.

Study Area

Per the procedures 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 Project Area, 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 Study Area is inappropriate. The Applicant is proposing a two- to five-mile radius Study Area to identify specific architectural resources through background research in CRIS.

APE

As codified in 36 CFR 800.16(d), the APE 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. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.*

For assessment of effects to historic architectural properties, 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 solar Project.

Direct effects occur in the area of construction, in areas where Project components will be visible, and where there is potential for a significant visual, atmospheric, or audible effect (ACHP 2019). The Project is expected to have no physical impacts to above-ground resources. Indirect effects (visual, atmospheric, or audible) also occur in areas removed in distance and/or occur later in time, after Project construction is complete.

The historic architectural resource APE for direct and indirect effects likely comprises those areas within a two-to-five mile-radius Study Area of the Project Area boundaries and that have a views 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 Town of Copake in Columbia County. The Applicant will consult with OPRHP on the final determination of the Study Area radius and APE for the Project.

Architectural Field Survey

The Applicant will conduct an architectural field survey of the APE, as defined by OPRHP. The architectural field survey will revisit all previously recorded resources and document any newly identified architectural resources 50 years old or older within the Project APE. The architectural field survey will include systematically driving on public roads within the APE to identify resources present. Resources will be assessed from the public ROW.

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 characteristic of each resource. The NRHP evaluation of architectural 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 Resources Survey 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, and survey 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 previously recorded listed, eligible, and undetermined resources, and newly architectural resources in the APE. Surveyed resources will also be entered into CRIS with the report.

Proposed Exhibit 20 Contents

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 will initiate consultation with the New York State OPRHP via the CRIS system 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 16 NYCRR § 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, to the maximum extent practicable;

(2) A Phase IA archaeological/cultural resources study for the APE for the Project Area, as determined in consultation with OPRHP, 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 NYSDPS, if warranted based on Phase I study results;

(5) A Phase III Data Recovery Plan, following completion of a Phase II archaeological study, if any identified archaeological site cannot be avoided through modification of Project design. The Phase III Data Recovery Plan will be prepared by the Applicant in consultation with the NYS OPRHP and submitted as part of the Compliance Filing. The Phase III Data Recovery would be conducted in advance of any ground-disturbing activities and would serve to mitigate impacts caused by Project development to any National Register of Historic Places (NRHP)-eligible archaeological site(s).

(6) A complete list of all recovered artifacts; and

(7) 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 buildings or structures listed or eligible for listing in the SRHP or NRHP within the Study Area and the APE of the Project. The study will include an analysis of adverse effects to any historic property in the APE that is listed, eligible, or recommended eligible for listing in the SRHP 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.

(1) The Applicant will consult with OPRHP and NYSDPS to obtain input concerning appropriate criteria for Historic Architectural studies, including defining the APE. The archeological study area shall be 2 to 5 miles from the boundaries of the Project Area. The Applicant proposes a visibility-based APE of 2 to 5 miles as well.

(2) Any cemeteries and other significant cultural features within the APE will be identified. Access to cemeteries located within the Project Area will be discussed.

(c) On behalf of NYSDPS, consultation with Federally Recognized Indian Nations will be initiated by OPRHP, consistent with government-to-government consultations. Based on the Project's geographical location, consultation will be conducted with the Mohican Indian Nation, Delaware Nation, and Delaware Tribe and other Indian Nations as determined by NYSDPS and OPRHP. The Tribal Historic Preservation Offices (THPO) will be included on the Master Stakeholder List and documentation of these consultations will be included in the Application and reflected in the Meeting Log.

(d) Installation methods used for collection lines and potential impacts on cultural resources will be included in the Application.

3.21 Geology, Seismology, and Soils (Exhibit 21)

No significant impacts are anticipated to occur to geology, topography, and soils as a result of Project construction. Project impacts will be limited to temporary, minor impacts to the topography. Only minor cut and fill, or the addition of fill, may be required in areas where the topography is not level enough for the installation of the solar arrays and/or construction of access roads.

A preliminary investigation of the geology, seismology, and soils within the Project Area will be conducted to identify the general conditions anticipated for the Project. Additionally, observations about localized geologic topographic conditions will be based upon preliminary reconnaissance level field surveys.

A study of the geology, seismology, and soils within the Project Area will be included in Exhibit 21 of the Application. Each study will consist of the identification and mapping of existing conditions, an impact analysis, and proposed impact avoidance and mitigation measures. 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 interconnection facility (inclusive of potential energy storage system).

A map delineating existing slopes (0 to 3 percent, 3 to 8 percent, 8 to 15 percent, and 15 percent or greater) within the drainage area potentially impacted by the Project has been prepared using the USGS National Elevation Dataset (see Figure 7). 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 2-foot intervals, the solar array locations, access roads, laydown and staging areas, proposed collection substation, and interconnection facilities (inclusive of a potential energy storage system). The Applicant proposes to use 2-foot contours constructed from

publicly available digital elevation models (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. The Applicant 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 2-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 array 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 use 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 and, therefore, will not require 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 chippers, or chipping hammers.

Within the Project Area, there is one main geologic unit present. This is the Walloomsac Formation. This geologic unit is part of the Lorraine, Trenton, and Black River Groups up to 4,500 feet (1,400 meters). This unit is part of the Middle Ordovician geologic age and occupies a portion of Columbia, Dutchess, and Rensselaer Counties. The unit was formed primarily from major components of metamorphic, metasedimentary, metaclastic, phyllite, slate, and schist and minor components of metamorphic, metasedimentary, metaclastic, metasandstone, and metagraywacke (USGS, 2020).

Should trenchless methods (e.g., HDD) be determined necessary to construct the Project, their locations will be included in the Application. HDD methodology will focus on routing Project components around streams, wetlands, and/or significant natural resources indicated by State and Federal agencies where deemed pertinent to the Project. Specific locations will be determined using appropriate siting methods including appropriate setbacks from water resources and investigations into local bedrock/sub-soil characteristics. Erosion control measures and an inadvertent return plan to be utilized during HDD activities will also be provided.

The use of blasting techniques is not anticipated, and as such, 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 8). The USDA NRCS Web Soil Survey indicates that five of the soils found in the Project Area are soils of Statewide Importance for Farmland. The 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, hydrological soil groups (HSG),

and farmland classification. The soils included below represent the soils that 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 Columbia County, New York indicates that the Project Area predominantly consists of silty loams, ranging from very poorly drained to somewhat excessively-drained soils. In addition, the soils established on site were classified by their farmland importance and were classified as "Farmland of Statewide Importance," "All Areas are Prime Farmland," "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

Alden mucky silt loam, 0 to 3% slopes (Ad) –

Consists of very poorly drained soils that occur on toeslopes and bases slopes of depressions. These soils are developed in a silty mantle of local deposition over overlying loamy till. Its typical profile is 0 to 60 inches thick.

Blasdell channery loam, hilly, 10 to 30% slopes (BlD) –

Consists of well drained soils that occur on backslopes and risers of alluvial fans and terraces. These soils are developed in channery loamy glaciofluvial deposits derived mainly from local acid shale bedrock. Its typical profile is 0 to 60 inches thick.

Blasdell channery silt loam, 0 to 3% slopes (BmA) –

Consists of well drained soils that occur on summits and treads of terraces and alluvial fans. These soils are developed in channery loamy glaciofluvial deposits derived mainly from local acid shale bedrock. Its typical profile is 0 to 60 inches thick.

Blasdell channery silt loam, 3 to 8% slopes (BmB) –

Consists of well drained soils that occur on summits and treads of terraces and alluvial fans. These soils are developed in channery loamy glaciofluvial deposits derived mainly from local acid shale bedrock. Its typical profile is 0 to 60 inches thick.

Castile gravelly silt loam, 0 to 3% slopes (Ce) –

Consists of moderately well drained soils that occur on summits and treads of valley trains and terraces. These soils are developed in gravelly loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits, derived mainly from sandstone, shale, and siltstone. Its typical profile is 0 to 72 inches thick.

Elnora fine sandy loam, 0 to 3% slopes (En) –

Consists of moderately well drained soils that occur on summits and treads of beach ridges and deltas. These soils are developed in sandy glaciofluvial, eolian, or deltaic deposits. Its typical profile is 0 to 60 inches thick.

Fluvaquents-Udifluvents complex, frequently flooded, 0 to 3% slopes (Fn) –

Consists of poorly drained soils that occur on toeslopes and dips of flood plains. These soils are developed in alluvium with highly variable texture. Its typical profile is 0 to 60 inches thick.

Georgia silt loam, 3 to 8% slopes (GaB) –

Consists of moderately well drained soils that occur on summits and crests of drumlinoid ridges, hills, and till plains. These soils are developed in loamy till derived mainly from limestone, shale, or slate. Its typical profile is 0 to 60 inches thick.

Hoosic gravelly sandy loam, 3 to 8% slopes (HoB) –

Consists of somewhat excessively drained soils that occur on summits and treads of deltas, outwash plains, and terraces. These soils are developed in sandy and gravelly glaciofluvial deposits. Its typical profile is 0 to 60 inches thick.

Hoosic gravelly sandy loam, rolling, 6 to 16% slopes (HoC) –

Consists of somewhat excessively drained soils that occur on summits and treads of deltas, outwash plains, and terraces. These soils are developed in sandy and gravelly glaciofluvial deposits. Its typical profile is 0 to 60 inches thick.

Hoosic gravelly sandy loam, hilly, 15 to 30% slopes (HoD) –

Consists of somewhat excessively drained soils that occur on backslopes and risers of deltas, outwash plains, and terraces. These soils are developed in sandy and gravelly glaciofluvial deposits. Its typical profile is 0 to 60 inches thick.

Limerick silt loam, 0 to 3% slopes (Ln) –

Consists of poorly drained soils that occur on toeslopes and dips of flood plains. These soils are developed in alluvium that is dominantly silt and very fine sand. Its typical profile is 0 to 60 inches thick.

Linlithgo silt loam, 0 to 3% slopes (Lo) –

Consists of somewhat poorly drained soils that occur on footslopes and talfs of flood plains. These soils are developed in loamy alluvium over sandy and gravelly water-sorted deposits. Its typical profile is 0 to 60 inches thick.

Manlius channery silt loam, 3 to 8% slopes (MnB) –

Consists of well drained soils that occur on summits and crests of benches, ridges, and till plains. These soils are developed in loamy till derived mainly from local acid shale bedrock. Its typical profile is 0 to 44 inches thick.

Manlius channery silt loam, 8 to 15% slopes (MnC) –

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 derived mainly from local acid shale bedrock. Its typical profile is 0 to 44 inches thick.

Nassau channery silt loam, 6 to 16% slopes (NbC) –

Consists of somewhat excessively drained soils that occur on shoulders and crests of benches, ridges, till plains. These soils are developed in channery loamy till derived mainly from local slate or shale. Its typical profile is 0 to 27 inches thick.

Nassau channery silt loam, rolling, very rocky, 16 to 30% slopes (NbD) –

Consists of somewhat excessively drained soils that occur on shoulders and crests of benches, ridges, and till plains. These soils are developed in channery loamy till derived mainly from local slate or shale. Its typical profile is 0 to 27 inches thick.

Nassau channery silt loam, steep, very rocky, 25 to 35% slopes (NbE) –

Consists of somewhat excessively drained soils that occur on backslopes and side slopes of benches, ridges, and till plains. These soils are developed in channery loamy till derived mainly from local slate or shale. Its typical profile is 0 to 27 inches thick.

Occum loam, 0 to 3% slopes (Om) –

Consists of well drained soils that occur on summits and rises of flood plains. These soils are developed in loamy over sandy alluvium. Its typical profile is 0 to 60 inches thick.

Pittstown silt loam, 3 to 8% slopes (PtB) –

Consists of moderately well drained soils that occur on summits and crests of drumlinoid ridges, hills, and till plains. These soils are developed in loamy till. Its typical profile is 0 to 60 inches thick.

Pittstown silt loam, 8 to 15% slopes (PtC) –

Consists of moderately well drained soils that occur on summits and crests of drumlinoid ridges, hills, and till plains. These soils are developed in loamy till. Its typical profile is 0 to 60 inches thick.

Pittstown silt loam, 15 to 25% slopes (PtD) –

Consists of moderately well drained soils that occur on summits and side slopes of drumlinoid ridges, hills, and till plains. These soils are developed in loamy till. Its typical profile is 0 to 60 inches thick.

Punsit silt loam, 3 to 8% slopes (PuB) –

Consists of somewhat poorly drained soils that occur on footslopes and base slopes of till plains. These soils are developed in loamy till derived mainly from slate, phyllite, shale and schist. Its typical profile is 0 to 60 inches thick.

Punsit silt loam, 8 to 15% slopes (PuC)

Consists of somewhat poorly drained soils that occur on footslopes and base slopes of till plains. These soils are developed in loamy till derived mainly from slate, phyllite, shale and schist. Its typical profile is 0 to 60 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 interconnection facilities (inclusive of a potential energy storage system), 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 explained in Exhibit 21 of the Application and will provide a description of regional geology, tectonic settings, and 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 used 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 Columbia County, Geology of Columbia 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 interconnection facilities (inclusive of a potential energy storage system) 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 Columbia County was analyzed based on the New York 2014 Seismic Hazard Map (see Figure 9). Based on the mapping, Columbia County is located in an area with a 2 percent probability over 50 years of peak acceleration exceeding 10 percent to 14 percent of the force of gravity. This indicates relatively low probability for seismic activity and bedrock shift in the vicinity of the Project Area.

Proposed Exhibit 21 Contents

The Applicant proposes to collect, evaluate, and provide the following information to support and prepare Exhibit 21 of the Application in accordance with 16 NYCRR § 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) Information describing methods considered and proposed to avoid disturbance, erosion and/or sedimentation of steep slopes (i.e., slopes steeper than 3:1 [h:v], and/or greater than 15%), as applicable.

(c) 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.

(d) 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 both the Columbia County Soil Survey and the New York State Museum and Science Service. 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 Project or interconnections. Separate estimates for materials that may need to be imported to the Project Area for access road construction, structural base for foundations, and compacted fill for placement of buried electric lines will be provided as applicable.

(e) A description and preliminary calculation of the amount of fill, gravel, asphalt, and surface treatment material to be brought into 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.

(f) No fill, gravel, asphalt, cut, 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.

(g) 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.

(1) If HDD is proposed for stream/wetland crossings, road crossings, or other locations, the Application will include:

(i) A description of HDD operations and locations
(ii) Safety Data Sheets (SDS) for drilling fluids, to the extent known at the time of filing.
(iii) Maps identifying the proposed HDD locations
(iv) Identification of stream/wetland crossing techniques, including a typical HDD equipment layout diagram
(v) An HDD feasibility analysis and inadvertent return risk evaluation plan based on known and suspected soil and bedrock conditions.

(h) A delineation of temporary cut or fill storage areas to be employed.

(i) 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.

(j) Exhibit 21 will include an evaluation of potential impacts to existing natural and artificial drainage features, particularly in areas where the Project Area overlies soils with a shallow water table and poor infiltration rates. Measures for stabilizing excavation walls in locations where saturated or near-saturated soils exist, and measures to repair or replace existing drainage features that are damaged during construction will be described in the Application.

(k) 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 including procedures and timeframes for notifying municipal officials and property owners (or persons residing at the location if different) within one-half mile radius of the blasting site of these activities, as well as an assessment of potential blasting impacts, and a blasting impact mitigation measures plan will be provided. The evaluation of reasonable mitigation measures regarding blasting impacts will include recommendations for setbacks from existing wells, including all identified water supply wells, livestock, residences, and other structures, and plans for pre- and post-blasting inspections of existing structures. In order to protect structures from damage, blasting shall be designed and controlled to meet the limits for ground vibration set forth in United States Bureau of Mines (USBM) Report of Investigation 8507 Figure B-1 and air

overpressure shall be under the limits set forth in the Conclusion section in USBM Report of Investigation 8485 (USBM RI 8507 and USBM RI 8485).

(l) An assessment of potential impacts of blasting to environmental features, aboveground structures, and belowground structures such as pipelines, wells, and drain tiles, if applicable.

(m) 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.

(n) A description of the regional geology, tectonic setting, and seismology of the Project Area.

(1) The Application will include information regarding the underlying carbonate karst formation of the Taconic Foothills Ecoregion and methods considered and employed to avoid disturbance of these features (USGS, 2014).

(2) The Application will include a site-specific karst conditions assessment that will provide the following: (i) identification of manner(s) in which construction activities will minimize excavations in karst-prone areas where excavations may facilitate subsurface erosion; (ii) risks and impacts to karst features and aquifers from directional drilling inadvertent returns and soil and bedrock displacement during excavations, boring operations, and pile driving will be addressed; (iii) although blasting is not anticipated, if blasting is proposed, a description of potential impacts to karst features from blasting operations.

(3) A description of the local rock types, including the Project Area's underlying stratigraphic unit the Walloomsac Formation; which constitutes the Lorraine, Trenton, and Black River Groups. These Walloomsac group formations consist primarily of phyllite, slate, and schist. Information will be provided as to whether the site-specific formations are amenable to standard excavation methods and.

(o) An analysis of the expected impacts of construction and operation of the Project with respect to regional geology, if such can be determined.

(p) 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.

(q) 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. The Applicant will consult with the local NRCS office to identify the location of any local farmland designations, which shall be delineated on the maps, if applicable;

(r) 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.

(s) 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, 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, and closed public landfills, if applicable, 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 Project, and on-site field observations, test pits, and/or borings as available.

(t) An evaluation to determine suitable proposed collection substation 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 to 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.

(4) A description of methods for minimizing, to the maximum extent practicable, construction-related vibrational impacts on nearby infrastructure, along with a description and justification of any proposed pile-driving setback distances.

(u) 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 coastal water, the Application will not address tsunami vulnerability.

(v) As applicable, an evaluation of corrosion potential, including separate evaluations for the potential for corrosion of coated and uncoated steel and the potential for corrosion and degradation of concrete;

(w) A discussion of consistency, to the maximum extent practicable, with the NYSDAM guidance document entitled Guidelines for Agricultural Mitigation for Solar Energy Projects (most recent version at time of Application filing).

(x) As applicable, an evaluation of the risk of damage or displacement to foundations and underground cables from frost action and soil shrink/swell (if applicable based on the soils types within the Project Area). If existing soils are proposed for re-use as structural and/or compacted fill, the Application will assess the suitability of existing soils specifically for

those purposes and describe screening measures to remove materials that do not meet the fill composition characteristics recommended by the Applicant's geotechnical expert.

(y) The Applicant will provide a map showing locations of mines/quarries, oil and gas wells, and associated features within the Study Area. If bedrock will be quarried from within the Project Area for Project use, the Application will identify the locations of quarry areas, provide estimates of the amount of materials that will be removed, and describe the proposed methods of excavation and processing as applicable.

(z) The Application will include an identification of all oil and/or natural gas wells that are located within the Project Area and 500 feet from the boundaries thereof. The identification will be based on records maintained by NYSDEC. The Application will include a map depicting the location of all wells, along with the proposed permanent Project components. The map will include wells known to exist and any wells discovered during magnetometer surveys (conducted to locate all wells including those lacking any surface expression), if conducted. The location of the wells discovered will be recorded in decimal degrees, NAD 83, with six decimal places of accuracy. A buffer area of 100 feet will be shown around the permanent Project components. If it is determined that Project components cannot be located outside of the NYSDEC's recommended 100-foot buffer area, the Applicant will consult with NYSDEC. The need for the magnetometer survey will be addressed following review of the DEC records. A description of controls for minimizing, to the maximum extent practicable, and monitoring impacts to existing gas infrastructure during construction of the Project, including measures for responding to the discovery of existing or abandoned wells.

3.22 Terrestrial Ecology and Wetlands (Exhibit 22)

Exhibit 22 of the Application will include a summary of the on-site field surveys and desktop review utilized to collect information on the ecological communities within the Project Area. Reconnaissance-level field surveys, including a wetland and waterbody delineation, and thorough desktop review will be conducted to identify plant, wildlife, and sensitive terrestrial communities. Winter raptor surveys were initiated in November 2019 and concluded March 31, 2020. Other species-specific surveys will be conducted prior to submission of the Article 10 Application, including a breeding bird survey (BBS). A preliminary desktop review was conducted to identify the main terrestrial and wetland ecological communities mapped within the Project Area and are summarized below.

Regional

The Project Area is within the Northeastern Highlands ecological region (ecoregions), as defined by Bryce et al. (2010). The Northeastern Highlands ecoregion is assigned the map unit "58," which covers the most mountainous portions of New York. This ecoregion is comprised primarily of hills and mountains with nutrient-poor frigid and cryic soils.

More specifically, the Project Area falls within the NYSDEC's Taconic Foothills (map unit 58x). The Taconic Foothills is located between the Hudson Valley and the Taconic Mountains and forms a transition zone between the valley and surrounding highlands. The Taconic Foothills are underlain by the same ancient metamorphosed rock as the Taconic Mountains although the majority of the region has been buried by glacial till. Maple, beech and birch dominate the north whereas oak and hickory forest dominates the southern portions of the region. The foothills were historically utilized and cleared for agriculture but today it has been developed for rural residential development with a small fraction being used for cropland and pasture (Bailey et al., 1994).

A majority of the Project Area is located within the New England and Eastern New York Upland, Southern Part, Major Land Resource Area (MLRA), as determined by the USDA classification system. The New England and Eastern New York Upland, Southern Part MLRA is comprised of rolling to hilly uplands that are fragmented by gently sloping to level valleys that end in the coastal lowlands. Land use consists of forest, cropland, grassland, urban development and water. This MLRA supports northern and central hardwoods such as sugar maple, birch, beech, oaks and hickories with white pine and hemlock being the dominant conifers. The average annual

precipitation in this MLRA is 45 to 54 inches in the southern end of the western part of the area (NRCS, 2006).

Local

A preliminary review of aerial orthoimagery, in combination with on-site ecological surveys, contributed to land cover determinations within the Project Area. This preliminary review and surveys determined the vegetative cover type within the Project consists primarily of deciduous forest (45.5 percent), pasture/hay (26.8 percent), cultivated crops (9.8 percent), woody wetlands (5.9 percent), and developed open space (3.5 percent). . The Application will include a more in-depth description of plant communities identified within the Project Area based on data collected during supplemental ecological resources surveys. Per 16 NYCRR § 1001.22, the Application will also include a discussion about potential impacts to agricultural land and calculations of both temporary and permanent impacts. The Application will include an evaluation of any necessary agricultural restoration for on-site laydown areas anticipated to be temporarily disturbed during construction.

Wetland Mapping and Designated Functions and Values

Wetland biologists will use functions and values to evaluate each wetland identified within the Project Area. Functions are self-sustaining properties of a wetland ecosystem that exist in the absence of society. Functions are a result of living and non-living components of a specific wetland, including primary production, nutrient cycling, and other processes necessary for self-maintenance of a wetland's ecosystem. Therefore, functions relate to the ecological significance of wetland properties without regard to subjective human values (USACE, 1999). Values are the wetland characteristics that are beneficial to society (USEPA, 2016).

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. The Application will include the results of the functions and values determined for evaluation of the Project by the best professional judgement of a wetland scientist.

Avoidance, Minimization, and Mitigation Measures

In addition to careful design, the Applicant will implement the following BMPs to avoid and/or minimize impacts to wetland and waterbody resources identified within the Project Area to the maximum extent practicable:

- Siting solar arrays, access roads, proposed collection lines, collection substation, interconnection facilities (inclusive of a potential energy storage system) 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 wetland and waterbodies to pre-construction conditions;
- Implementation of a SWPPP to minimize impacts to wetlands during construction; and

- Implementation of a Spill Prevention, Containment, and Counter Measures plan (SPCC) and using a buffer system around wetlands.

A more detailed discussion of these measures will be included in the Application and Exhibit 22 Appendices.

Wildlife

Amphibians and Reptiles

Information on amphibian and reptile distribution throughout the Project Area was obtained through the NYSDEC's continuation of the "Amphibian and Reptile Atlas Project" (Herp Atlas Project). The Herp Atlas Project began as a 10-year survey that was conducted from 1990 to 1999, with additional reports that were gathered up to 2007. The Herp Atlas Project was designed to document the distribution of the approximately 70 species of amphibians and reptiles found in New York State. The Herp Atlas Project uses the USGS 7.5-minute series quadrangle as the standard "unit of measurement" to demonstrate the distribution of amphibians and reptiles. The Project Area is located within the Hillsdale, NY 7.5-minute series quadrangle, and based on the Herp Atlas Project distribution maps, the reptiles and amphibians documented on these quadrangles include those listed in Table 3-1 below.

Table 3-1. Reptiles and Amphibians Potentially within Project Area

Scientific Name	Common Name	7.5 Minute Quadrangle
Amphibians		
Anaxyrus americanus	American toad	Hillsdale
Ambystoma laterale	Blue-spotted Salamander	Hillsdale
Lithobates catesbeianus	Bullfrog	Hillsdale
Desmognathus fuscus	Dusky Salamander: Northern Dusky	Hillsdale
Hemidactylium scutatum	Four-toed Salamander	Hillsdale
Hyla versicolor	Gray treefrog	Hillsdale

Scientific Name	Common Name	7.5 Minute Quadrangle
Rana clamitans	Green Frog	Hillsdale
Lithobates pipiens	Northern Leopard Frog	Hillsdale
Lithobates palustris	Pickerel Frog	Hillsdale
Plethodon cinereus	Red-backed Salamander	Hillsdale
Notophthalmus viridescens	Red-spotted Newt	Hillsdale
Pseudacris crucifer	Spring Peeper	Hillsdale
Eurycea bislineata	Two-lined Salamander	Hillsdale
Lithobates sylvaticus	Wood Frog	Hillsdale
Ambystoma maculatum	Spotted Salamander	Hillsdale
Reptiles		
Lampropeltis triangulum	Milk Snake	Hillsdale
Storeria dekayi	DeKay's Brownsnake	Hillsdale
Thamnophis sirtalis	Common Gartersnake	Hillsdale
Nerodia sipedon	Northern Water Snake	Hillsdale
Chrysemys picta	Painted Turtle	Hillsdale
Elaphe sp.	Ratsnake	Hillsdale
Thamnophis sauritus	Ribbonsnake	Hillsdale
Diadophis punctatus	Ring-necked Snake	Hillsdale
Opheodrys vernalis	Smooth Greensnake	Hillsdale
Chelydra serpentina	Snapping Turtle	Hillsdale

Scientific Name	Common Name	7.5 Minute Quadrangle
Clemmys guttata	Spotted Turtle	Hillsdale
Sternotherus odoratus	Stinkpot (Common Musk Turtle)	Hillsdale
Glyptemys insculpta	Wood Turtle	Hillsdale

The Application will include a discussion of potential direct and indirect impacts to amphibians and reptiles, including any measures necessary to avoid or mitigate any significant impacts.

Mammals

Plant habitats within the Project Area support typical wildlife such as whitetail deer (*Odocoileus virginianus*), black bear (*Ursus americanus*), coyote (*Canis latrans*), red fox (*Vulpes vulpes*), gray fox (*Urocyon cinereoargenteus*), striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), eastern cottontail (*Sylvilagus floridanus*), woodchuck (*Marmota monax*), eastern chipmunk (*Tamias striatus*), gray squirrel (*Sciurus carolinensis*), and several species of bat (*Chiroptera*), mouse (*Mus musculus*), vole (*Microtus* spp.), shrew (*Soricidae*), and mole (*Talpa europaea*).

The Application will include a discussion of potential direct and indirect impacts to mammal species that are reasonably likely to occur within the Project Area or within its immediate vicinity, and any measures deemed necessary to avoid or mitigate significant impacts.

Avian

Habitats within the Project Area support typical avian species including, but not limited to, many common species of songbird, American crow (*Corvus brachyrhynchos*), turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), and American kestrel (*Falco sparverius*). Small marshes and rivers located within farmland, typical of the Project Area, may support common waterfowl habitat (e.g., mallard).

The Application will include a discussion of potential direct and indirect impacts to avian species that are reasonably likely to occur within the Project Area or within its immediate vicinity, and any measures deemed necessary to avoid or mitigate significant impacts.

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

Federal-Listed Threatened and Endangered Species

Initial contact will be 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 Federally 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 the Indiana bat (*Myotis sodalis*) and bog turtle (*Clemmys muhlenbergii*) as an endangered and threatened species, respectively, which could potentially occur within the Project Area.

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 within the Project Area vicinity. The results of the ERM review indicated that there were no potential "Rare Plants and Rare Animals" or significant natural communities near the Project.

Grassland Breeding Birds and Winter Raptors

As the Project Area includes areas of grasslands, the Applicant has developed a Grassland Breeding Bird Survey Study 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. Field surveys began in May 2020 and will be conducted through July 2020. The results of these surveys will be assessed and a final report summarizing the findings will be submitted to the NYSDEC, subject to confidentiality protections, and will be included in the Application.

Additionally, the Applicant developed a Winter Raptor Survey Site-Specific Work Plan in November 2019 to describe the approach for determining presence and site use by State-listed threatened/endangered or rare winter raptor species. Field surveys were conducted weekly from November 2019 through March 2020. The results of the surveys are currently being assessed and a final report summarizing the findings will be submitted to the NYSDEC, subject to any required confidentiality protections, and will be included in the Application.

Invasive Species Management

A comprehensive list of the invasive species identified during field investigations, within the anticipated limits of disturbance, will be included in the Application. The Applicant will prepare, and include in the Application, an Invasive Species Management and Control Plan (ISMCP) to control the spread of invasive species that may results from construction vehicles and equipment. The ISMCP 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.

No large-scale transportation of fill materials to, from, or within the Project Area is anticipated at this time. Therefore, the spread of invasive species is anticipated to be minimal for the Project. Should transported fill be determined necessary, the Applicant will require contractors to assure that imported fill is free of invasive species prior to use. As the Applicant intends to use remnant stockpiled materials as part of restoration, no fill transportation out of the Project Area is anticipated to occur.

Proposed Exhibit 22 Contents

The Applicant proposes to collect, evaluate, and provide the following information to support and prepare Exhibit 22 of the Application in accordance with 16 NYCRR § 1001.22:

(a) A list including 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. The observation date for each species will be included as part of the plant community descriptions. The Application will also include maps and shapefiles depicting plant communities identified within the Project

Area, electric interconnection lines, and adjacent properties (based upon roadside surveys).

(1) The list will include specific information on, and a detailed description of, all communities found within parcels that will host facility components based on communities described in the Ecological Communities of New York State (Edinger et al., 2014). For each community identified, Heritage Program Element Ranks will be provided.

(2) Maps of the Project Area at a scale of 1:6,000 (1"=500'), based on aerial photography, and National Land Cover Data (NLCD) information showing approximate locations and extent of identified plant communities as classified according to Ecological Communities of New York State (Edinger et al., 2014).

(3) Maps at a scale of 1:1,200 (1"=100') showing approximate locations and extent of identified plant communities as classified according to Ecological Communities of New York State (Edinger et al., 2014) for Project Areas within 100 feet of disturbance. Plant communities for parcels outside the Project Area on which the Applicant does not have control will be determined as identified through the NLCD, and observations made from publicly accessible roads, as feasible.

(4) A narrative description of the following: i) Approximate locations and extent of identified plant communities, including areas of invasive species concentrations; ii) All ecological communities identified within parcels that will host Project components as well as adjacent parcels; and iii) A list of all plant species observed during on-site field investigations and incidentally, including the date(s) each species was observed.

(5) The sources of information including on-site surveys, roadside surveys from adjacent parcels, review of recent aerial imagery and NLCD information.

(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/minimize the introduction and/or spread of invasive species.

(1) Proposed temporary and permanent impacts to plant communities shall be calculated and discussed including:

(i) A discussion of specific assumptions associated with approximate limit of vegetation clearing for each type of Facility component as identified in the Preliminary Design Drawings associated with Exhibit 11;

(ii) A table listing area assumptions used to determine vegetation disturbance by component (e.g., solar panel installations, roads, collection lines, staging area, collection substation, switching station, and generation tie line);

(iii) The number of acres of each habitat type impacted, calculated using GIS software, and presented in a summary impact table. Permanent impact calculations will include all tree clearing and other cover type conversion for construction and operation of the Project.

(iv) The plant community mapping will also depict vegetation cover types and a table shall provide acreages for each of the following cover types; active agricultural land, row crops, pasture/hay, fallow fields, and grasslands, areas of active management (e.g., recent logging), and any concentrations of invasive species in relation to proposed limits of vegetation disturbance, and associated GIS shapefiles of all areas of disturbance will be provided to NYSDEC and NYSDPS and to any intervening parties upon written request, subject to any confidentiality limitations.

(v) A summary impact table quantifying the number of acres of each plant community type impacted. Vegetation impacts including any temporary and permanent impacts, and indirect impacts to existing, non-invasive plant communities, particularly grasslands, interior forests, wetlands, shrublands, and young successional forests will be included in the table. Permanent impact calculations including: i) all areas disturbed by Project components; ii) all tree clearing for construction of the Project; and iii) permanent conversion of one plant community type to another.

(vi) A discussion and evaluation of fragmentation to grasslands and forested habitat.

(vii) Maps and GIS files depicting the limits of disturbance (all areas of vegetation clearing and ground disturbance) overlaid with approximate locations and extent of identified plant communities, including areas of invasive species concentrations.

(2) An overview of vegetation management plans for operation and construction of the Facility, including a discussion of ground cover maintenance and tree clearing and ongoing vegetation maintenance required to prevent shading of solar panels.

(c) An identification and evaluation of reasonable avoidance measures or, where impacts are unavoidable, minimizations measures, including use of alternative technologies, that will be implemented to avoid and minimize, to the maximum extent practicable, for any temporary and permanent impacts to existing, non-invasive plant communities particularly grasslands, interior forests, wetlands, shrublands, and young successional forests as a result of the construction, operation, and maintenance of the Project.

(1) A discussion of measures to be included to avoid and minimize impacts to vegetation such as co-locating linear Project components, and constructing all solar arrays and other structures in areas already developed or disturbed, to the maximum extent practicable.

(2) A discussion of measures for post-construction vegetative restoration will be included such as reseeding disturbed areas with appropriate native seed mix or planting native woody species, as necessary, to recreate or enhance wildlife habitat.

(3) A summary impact table quantifying anticipated temporary and permanent impacts associated with the various facility components in relation to Project Area wildlife habitats, and vegetation cover types classified according to Ecological Communities of New York State (Edinger et al., 2014), particularly grasslands and interior forests, if affected.

(d) A characterization of the Project Area 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 Amphibian and Reptile Atlas Project, the NYS Breeding Bird Atlas (BBA) and range maps, BBS Routes, Christmas Bird Counts (CBC) and other similar reference sources, including time and date (i.e., day, month, and year) of observation, to the extent time and dates are available. Characterization will include:

(1) Assessments of wildlife habitat within the Project Area, and 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 (o).

(2) For the specific surveys identified and where draft reports to be submitted to NYSDEC have been identified, the Applicant will provide said draft reports to the NYSDEC, as soon as possible, when finalized.

(3) A discussion of the extent, methodology and results of all avian, bat, amphibian, and other wildlife surveys that have been and will be conducted within the Project Area and Study Area will be included, as applicable. Information on, and a characterization of, aquatic and terrestrial vegetation, wildlife, and wildlife habitats that occur within the Project Area will be included, specifically an identification and description of plant communities, plant species and wildlife habitat. Such descriptions will include field identification and verification of aquatic habitats, plant communities, and other wildlife habitat that could potentially support federally or NYS-listed T&E species, SSC, and species of greatest conservation need (SGCN) as documented during on-site field investigations (e.g., ecological cover type assessments, habitat assessments, and wetland delineations). Habitat identification will include the results of field studies, the Grassland BBSs, and Winter Raptor Survey. Coordination with USFWS, NYSDEC staff, and Natural Heritage Program (NHP) database to document known occurrences of bat species

in the Study Area, and relevant, applicable information regarding terrestrial vegetation, wildlife and wildlife habitats will be provided in the Application.

(4) A discussion of the potential impacts of perimeter fencing of the Project on wildlife movements, and opportunities for minimizing adverse impacts, to the maximum extent practicable.

(5) A characterization of aquatic and terrestrial vegetation, wildlife and wildlife habitats within the Project Area, including a narrative description, detailed location map, and discussion of potential impacts for habitats that are known to support or could potentially support State SGCN.

(6) Identification and delineation of vernal pools, including surrounding upland habitat, within 100 feet of all proposed areas of disturbance. If vernal pools are identified, the Application will include: i) Ecological characterization data; ii) Detailed location maps; iii) Results of site-specific surveys for amphibians and reptile species developed and presented in consultation with NYSDEC staff; and iv) Potential impacts that may occur to vernal pools and the species that utilize them. If vernal pool identification must occur outside the ideal survey season, appropriate protocols shall be developed to align with Project Area conditions.

(e) The Application will include an inventory of and information on plant species and wildlife species (mammals, birds, terrestrial invertebrates, amphibians, and reptiles (herpetofauna)) known or reasonably likely to occur within the Project Area and areas to be disturbed for interconnections during the year based on site observations, as well as existing data available from the following sources: NHP; NYSDEC; USFWS; local bird/wildlife experts; New York State Amphibian & Reptile Atlas Project (Herp Atlas); BBA; USGS BBS; CBCs; Hawk Migration Association of North America (HMANA); eBird; The Nature Conservancy surveys/reports; county-based hunting and trapping records maintained by NYSDEC, and supplemented by reasonably available public information, including those identified in paragraph (d) above, and/or not already listed in this paragraph. On-site field surveys (e.g., avian and bat surveys, amphibian/reptile surveys; ecological cover type assessments, habitat assessments, wetland delineations, etc.) and the availability of suitable habitat, will also be used to identify species that could potentially occur within or near the Project Area at some time during the year. The inventory will

specify whether species were observed, known to occur within the Project Area, or are predicted to occur based on habitat characteristics and historical records, and identify the data source(s) that documented or predicted the presence of each species. Information on terrestrial invertebrates should be limited to a general discussion regarding the range of species likely to occur near the Project.

(f) A narrative analysis and associated mapping to explain and illustrate potential and expected construction, operation, post-construction restoration, and maintenance impacts of the Project and interconnections on vegetative cover types, wildlife (reptiles, amphibians, mammal species, and avian species), wildlife habitats (including a discussion of impacts from functional loss and degradation of habitat, forest and grassland fragmentation, and wildlife displacement, as applicable), wildlife concentration areas, wildlife travel corridors, if identified, and terrestrial and aquatic organisms. This will include a general assessment of direct and indirect impacts and identification and evaluation of the expected environmental impacts of the Project on New York State SSC, SGCN, and threatened and endangered 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 (ECL) and § 15 of the PSL, 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. The Application will also include the following analyses:

(1) Avian analyses, specifically Grassland BBSs and Winter Raptor Surveys. Grassland BBSs began in May 2020 and will be ongoing through July 2020. Winter Raptor Surveys were completed and conducted from November 2019 to March 2020. The scope included property under the Applicant's control or visible from public roads. However, it should be noted that the Project Area was modified post-Winter Raptor Survey completion. A draft of each survey report will be provided to NYSDEC as soon as the reports are finalized. Final reports for both surveys, incorporating any comments provided by NYSDEC, (if practicable, upon notice to NYSDEC as to the estimated filing date of the application) will be provided in the Application, as will an assessment of any potential direct and indirect impacts to

grassland bird species habitat as a result of the Project. GIS shapefiles showing all breeding and winter bird survey locations will be provided to NYSDEC, with the final reports under applicable confidentiality protections. In addition, a discussion and analysis of any avian information relevant to the Project Area that is provided by NYSDEC, USFWS, or otherwise obtained by the Applicant prior to the submission of the Application will be included (if practicable, upon notice to NYSDEC and USFWS as to the estimated filing date of the Application).

(2) USFWS, NYSDEC staff, and NHP database information will be used to determine if any bat hibernacula or maternity roosts are located within the Study Area. If hibernacula or roosts are identified within five miles from the Project Area or any Project component or boundary, the location and distance to each identified hibernaculum and roost will be provided separately and confidentially to NYSDEC.

(3) Information on amphibians and reptiles based on the New York State Herp Atlas Project, database records obtained from NHP, NYSDEC and USFWS, assessments of suitable habitat within or near the Project Area will be provided. To the extent that vernal pools and their functions (including the surrounding upland habitat) may be impacted by construction, operation or maintenance of the Project, those features will be identified under appropriate seasonal conditions, and these impacts will be identified and assessed in the Application. Such impacts may require, in consultation with NYSDEC and NYSDPS, the development and implementation of site-specific surveys for amphibian and reptile species under appropriate seasonal conditions to fully quantify the level of impact from the Project.

(4) The Application will discuss potential construction-related direct and indirect impacts to wildlife (reptiles, amphibians, mammal species, and avian species) and wildlife habitat, including but not limited to incidental injury and mortality due to construction activity and vehicular movement, habitat disturbance and loss associated with vegetation clearing and earth-moving activities, and the displacement of wildlife from preferred habitat, likely to occur within the Project Area, including any potential avoidance and minimization measures that will be undertaken. The NYSDEC Region 4 Regional Wildlife Office will be contacted to obtain the most recent breeding, wintering, and habitat data for state-listed

species, and the USFWS Field Office in Cortland, New York will be contacted to obtain the most recent breeding, wintering, and habitat data for federally listed and protected species. Information that is provided by NYSDEC or USFWS prior to the submission of the Application will be included (if practicable, upon notice to NYSDEC and USFWS as to the estimated filing date of the application).

(5) The Application will discuss potential operational and maintenance-related direct and indirect impacts related to reptiles, amphibians, mammal species, and avian species likely to occur within the Project Area, including any documented wildlife corridors or concentrations areas.

(6) The assessment of herbicide application, if determined necessary, will consider the potential for short and long-term impacts to plants, animals, and habitats in the Project Area, as applicable, as well as trees, ground cover, and other vegetation planted as part of restoration, mitigation and habitat enhancement activities, as applicable.

(7) In addition to site-specific field studies, a literature review of reasonably available public information will be utilized to assess impacts to wintering and breeding grassland bird species resulting from the construction, operation, post-construction restoration and maintenance of the Project. Based upon the literature review, the Application will include a discussion of the potential population-level effects habitat loss is likely to have on grassland bird species within the 2-mile Study Area and at a regional scale due to the Project.

(8) The Application will include a summary impact table that clearly quantifies anticipated temporary and permanent impacts associated with all Project components in relation to wildlife habitats, identified concentration areas or travel corridors, and vegetation cover types, particularly grasslands, interior forests and young successional forests, if affected.

(9) A discussion of the potential impacts of the Project on wildlife species and the habitats that support them within the Study Area.

(10) If the Applicant determines that there will be a "take" of a threatened and/or endangered species as a result of the Project, then a draft Net Conservation

Benefit Plan will be included in the Application. If it is determined by the Siting Board that a "take" of a threatened and/or endangered species will be caused by the construction, operation, post-construction restoration, or maintenance of the Project within the meaning of 6 NYCRR 182, a full post-construction monitoring plan will be developed prior to the start of construction and submitted in the Compliance Filing for approval. The full post-construction monitoring plan filed with the Compliance Filing will include information associated with a proposed post-construction monitoring plan to be implemented to assess direct and indirect impacts of the Facility on wildlife species and their habitats. The details of a full post-construction monitoring plan will be developed on a site-specific basis through discussions between NYSDEC, the Applicant, and USFWS (if federally-listed species may be impacted) and submitted in the Compliance Filing for approval, and at a minimum will specify the following: the expected and allowed level of take of each T&E species that may be impacted; survey monitoring methods, effort, duration, data reporting, and compliance documentation; construction parameters; proposed adaptive management responses, if applicable, and mitigation measures sufficient to ensure the Applicant comply with the substantive requirements of 6 NYCRR Part 182.

(11) A cumulative impact analysis will be done to evaluate the actual and expected impacts from the construction operation and maintenance of the Project on Federally and State-listed threatened or endangered species, particularly grassland birds, in combination with the impacts of proposed and operating solar energy projects equal to or greater than 5 MW occupying grassland habitat within 100 miles of the Project Area based exclusively upon the NYSDEC database to be provided to the Applicant, and any publicly available information the Applicant, in its sole judgment, chooses to employ (Study Projects) but not beyond New York State borders (Grassland Study Area). The Applicant is not required to perform any avian studies at the Study Projects and reserves its right to object to other requests for cumulative studies. This analysis will include, at a minimum:

(i) Examination of open and grassland habitat data on the Study Projects within the Grassland Study Area relying exclusively on the NYSDEC database to be provided to the Applicant and any publicly available

information the Applicant, in its sole judgment, chooses to employ. The Applicant is not required to make Freedom of Information Act (FOIA) requests;

(ii) Estimated take of State-listed T&E bird species and their habitats at the Facility, if any, and a description of methods used, and sources consulted to estimate take;

(iii) Estimates of available open and grassland habitat within the Grassland Study Area, based upon the Study Projects;

(iv) Estimates of acres of grassland breeding bird habitat lost directly through installation of panels and other project components at the Study Projects, using best available information or typical industry solar land use metrics;

(v) Estimates of acres of grassland habitat indirectly affected by the Study Projects due to functional loss/degradation of habitat; and

(vi) Cumulative impacts on grassland habitat use, particularly potential impacts on State-listed grassland bird species, within the Project Area.

(g) An identification and evaluation of reasonable avoidance measures or, where impacts are unavoidable, measures to minimize impacts during siting and development of the Facility, to the maximum extent practicable, including the use of alternative technologies, regarding impacts to vegetation, wildlife, wildlife habitat, federally and state-listed and protected species, SSC, and SGCN. The Project design, construction controls, and operational, post-construction restoration, and maintenance measures that can be reasonably implemented to first avoid to the maximum extent practicable, then minimize, impacts to T&E listed wildlife and wildlife habitat as a result of construction, operation post-construction restoration, and maintenance of the Project will be described. If such impacts to T&E species cannot be demonstrably avoided to the maximum extent practicable, a discussion of the minimization measures to be implemented for impacts associated with habitat loss, fragmentation, displacement, and mortality will include careful site design while adhering to designated construction limits, seasonal restrictions, and other BMPs. If a "take" of listed T&E species is expected, the Applicant will include a draft Net Conservation Benefit Plan with the Application. If any demonstrably unavoidable impacts

are anticipated to listed T&E species or their habitats as a result of the Project, a commitment to mitigate in an appropriate and timely manner will be included. Such mitigation will be determined only after avoidance and minimization measures are evaluated and will result in a net conservation benefit to the target species.

(h) Specific impacts to avian and bat species related to wind powered facilities is not applicable to this Project.

(i) A map, at a scale of sufficient detail, showing delineated boundaries based on on-site identification of all Federal, State and locally regulated wetlands present on the Project Area and within 100 feet of areas to be disturbed by construction, and the interconnections, for land under control by the Applicant. The map will also include an estimation of the presence and extent of wetlands located greater than 100 feet from the areas to be disturbed, on land controlled by the Applicant, or are located within 100 feet of the limits of areas to be disturbed but are on parcels over which the Applicant does not have control. The estimations may be based on remote-sensing data, interpretation of published wetlands and soils mapping and aerial photography, or other methods as further described below. This methodology is consistent with the USACE Wetland Delineation Manual (Environmental Laboratory, 1987), the appropriate Regional Supplement to the Corps of Engineers Wetland Delineation Manual, the New York State Freshwater Wetlands Delineation Manual (1995), and the NYSDPS Staff interpretation dated May 31, 2018, concerning the delineation of all Federal, State and locally regulated wetlands present on the site and within 100 feet of areas to be disturbed by construction. Additionally:

(1) All wetlands in the Project Area, including those within 50 meters (164 feet) of a state-regulated wetland, regardless of size or connectivity, will be delineated and included in field mapping. Detailed location maps and ecological characterization data for all vernal pools located within 100 feet of related disturbances on all Project parcels will be included. Any part of the 100-foot survey area which falls outside of the Project parcels, without accessibility, will be estimated within 100 feet of the limits of disturbance.

(2) Wetland boundary estimation will only occur for areas located within 100 feet of areas to be disturbed by the Project, and will be made using one or more of the

following techniques: on-site observations, observations made from public roads and adjacent Project parcels, interpretation of aerial imagery, analysis of topography, existing databases of hydric soils, other remote-sensing data as available, and wetland and soils mapping maintained by National Wetlands Inventory (NWI) and NYSDEC. Wetlands identified using one or more of the techniques described will be referred to as "predicted wetlands."

(3) Wetland boundaries will be defined by the Applicant in the field by sequentially numbered pink surveyor's flagging marked "wetland delineation," the locations of which will be documented using GPS technology with reported sub-meter accuracy. Wetlands identified by these methods will be referred to as "delineated wetlands," and wetlands that have been verified by the USACE and the NYSDEC will be referred to as "field-verified wetlands." The Applicant will coordinate with the DPS, USACE, and NYSDEC to schedule an on-site field verification meeting to determine jurisdiction early in the Application process during the growing season. On-site field delineations by the Applicant shall include boundary flagging of all 100-foot wetland adjacent areas where such flagging does not interfere with currently active agricultural practices. All remaining 100-foot wetland adjacent areas boundaries will be flagged prior to construction/ground disturbance when agricultural practices are no longer active.

(4) Information indicating which delineated wetlands are likely NYSDEC regulated, including those that are part of wetland complexes that meet NYS-criteria for jurisdiction (i.e., 12.4 acres or larger or of unusual local importance) whether currently mapped or not, will be included. All NYS-regulated wetlands will be identified by NYSDEC's wetland identification number in addition to the code assigned by the Applicant during delineation. The Applicant will coordinate with the NYSDEC and USACE, as soon as practicable so the agencies may make final wetland jurisdictional determinations of field verified, mapped, and unmapped wetlands. The Application shall include information concerning the likely jurisdictional status of wetlands that is provided by NYSDEC or USACE prior to the submission of the Application (if practicable, upon notice to NYSDEC and USACE as to the estimated filing date of the Application).

(5) The Applicant will provide NYSDEC and NYSDPS with maps and shapefiles depicting the boundaries of all state-regulated wetlands, likely jurisdictional wetlands, predicted wetlands, and all corresponding adjacent areas within the entire Project upon finalization. All wetland boundaries will be keyed to the submissions described in Exhibit 11 (Preliminary Design Drawings). The "predicted wetland" boundaries shown on site plans should be differentiated from field "delineated wetland" boundaries when displayed on maps, site plans, and shapefiles. Maps and shapefiles showing the boundaries of all delineated wetlands, likely jurisdictional wetlands, predicted wetlands, and all corresponding adjacent areas within the entire Project will also include Project components; proposed grade changes; the limits of ground disturbance and vegetative clearing.

(j) A description of the characteristics of all Federal, State and locally regulated wetlands delineated, 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. A summary table of wetland delineation information, including the wetland's alpha- numeric code if the wetland is regulated or eligible for regulation under ECL Article 24. Copies of all wetland determination data forms, compiled into a Wetland and Stream Delineation Report, will be included in the Application. The methodology for this assessment will be included in the Application.

(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. The assessment will include a discussion of educational and scientific value of the wetlands inventoried, an analysis of production export of wetlands, and an assessment of protected T&E species habitat in wetlands.

(1) Vernal pools will be inventoried. The Application will identify actual or potential vernal pools that could be disturbed by construction and operation of the Facility. A discussion will be included that evaluates the use of the identified vernal pools by amphibians and the potential impacts to those species. Such evaluation of impacts may require, in consultation with NYSDEC and NYSDPS, the

development and implementation of site-specific surveys for amphibian and reptile species under appropriate seasonal conditions in order to fully quantify the level of impact from the Project and measures to avoid impacts to these species during construction, operation and maintenance of the Project.

(l) An analysis and summary of all wetlands outside of the Project Area that may be hydrologically or ecologically influenced by the development of the Project Area 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. A Wetland and Waterbody Delineation Report will be included as an attachment to the Application and will include an analysis of the potential hydrologic connectivity of all wetlands within the Facility Area to adjacent offsite wetlands and will include a summary of those wetlands anticipated to fall under NYSDEC jurisdiction and USACE jurisdiction. Assessments of potential NYS wetlands jurisdiction will include both "mapped" and "delineated" wetlands that meet NYSDEC's 12.4-acre size threshold (including any wetlands of any size separated by less than 50 meters (164 feet) which function as a unit in providing wetland benefits, within the meaning of 6 NYCRR Part 6643(b), or otherwise meet NYS criteria for jurisdiction over a wetland (see 6 NYCRR § 663.24(p), including wetlands designated by the NYSDEC Commissioner to be of Unusual Local Importance, pursuant to NYCRR 664.7(c)).

(m) An identification of temporary and permanent impacts to wetlands (and any State-regulated 100-foot adjacent areas) based on the proposed footprint of Project components and associated impact assumptions. A summary and table will be included in the Application to identify and quantify temporary and permanent impacts to, and any permanent conversions of, wetlands and NYS-regulated 100-foot adjacent areas based on the proposed footprint of Project components and associated impact assumptions. The table will also indicate permanent forest conversion, if any, caused as a result of the construction or maintenance of the Facility. For each resource included in the temporary and permanent impact table, the following information will be included as determined applicable. Final impact calculations to the 100-foot adjacent area of State-regulated wetlands and associated mitigation will be updated based on verified delineation boundaries for jurisdictional wetlands, as necessary.

(1) Wetland impacts will be presented in a table that will include:

(i) All State-regulated and jurisdictional wetlands, Federal wetlands, streams, and environmentally sensitive areas that could potentially be impacted by the Project as depicted in preliminary design drawings or wetland delineations;

(ii) Applicant-assigned wetland identification code, NYSDEC wetland identification number, NYSDEC wetland classification, and NYSDEC stream classification, as applicable;

(iii) Describe the type and acreage of impact, such as whether it is permanent, temporary, fill, shading of vegetation, or forest/shrubland conversion, and describe the vegetative cover type affected by each impact to each wetland and adjacent area.

(iv) The associated crossing methodology for each wetland, clearly discerning between Federal and State wetland and 100-foot adjacent area impacts.

(v) Calculation of impacts in square feet to both wetlands and 100-foot adjacent areas of State regulated wetlands.

(vi) Include wetland delineation type (i.e., field survey, review of aerial imagery, roadside observation, etc.);

(vii) For each resource explain if it could reasonably be avoided;

(viii) Proposed site-specific actions to minimize, to the maximum extent practicable, impacts to resources that are not avoided;

(ix) Propose site specific actions to minimize impacts to resources that are not bypassed, to the maximum extent practicable.

(x) Identify the corresponding page number on preliminary design drawings depicting the resource, and on the mapping described below.

(2) Impacts to wetlands will be presented on a separate set of site plan drawings at 1":50' scale (or deemed more appropriate upon review), showing wetland and

stream boundaries, permanent and temporary structures, stream crossings, roads, power interconnects, grade changes, and the limits of disturbance.

(n) An identification and evaluation of reasonable avoidance and minimization measures to streams, wetlands, and 100-foot adjacent areas will be discussed including the use of alternative stream and wetland crossing methods, alternative technologies, and control of potential phosphorus and nitrogen sources from the Project. The Application's discussion of avoidance and minimization will be updated, if necessary, upon final verification of wetland boundary and any jurisdictional determinations by NYSDEC or the USACE. The Application will address the requirements of 6 NYCRR Part 663. If appropriate, mitigation shall include plans for compensatory mitigation. Such plans shall contain sections, as necessary, on grading, planting, and monitoring for success.

(1) If the requirements of 6 NYCRR 663.5(e) and (f) cannot be met, a conceptual mitigation plan for impacts to NYS-regulated wetlands and adjacent areas will be included in the Application pursuant to 6 NYCRR 663.5(g) and at a minimum, will meet the following provisions if at all possible:

(i) The mitigation occurs on or in the immediate vicinity of the Facility (preferably elsewhere in or adjoining the same wetland);

(ii) The area affected by the proposed mitigation is regulated by the Freshwater Wetlands Act and 6 NYCRR Part 663 after mitigation measures are completed;

(iii) The mitigation provides substantially the same or more benefits than will be lost through the proposed activity;

(iv) A discussion of adaptive management actions to be implemented if the wetland mitigation is not successful; and

(v) A final mitigation plan, as applicable, will be provided in the Compliance Filing after consultation with NYSDEC and USACE.

(2) Off-site mitigation will be considered only if:

(i) The analysis being provided shows that all options within the immediate vicinity were thoroughly evaluated and determined to not be feasible.

(ii) A discussion of avoidance and minimization efforts considered will be included. This should indicate methods to be implemented to avoid wetland and stream impacts, as well as address the methodology and a description of Project construction and operation, relating to the standards established by ECL Articles 15 and 24.

(iii) A statement and discussion regarding the Applicant's consideration of the following impact and avoidance and minimization measures will be included in the Application: utilizing existing or narrow crossing locations wherever possible, alternative siting or routing options, trenchless crossings (such as HDD or other special crossing techniques), equipment restrictions, herbicide use restrictions, and erosion and sedimentation control measures.

(iv) The Application will describe the anticipated environmental compliance and monitoring programs to be implemented during Project construction, demonstrating adherence to all relevant permit conditions to protect wetlands, streams, and other waterbodies. The programs will include an Environmental Monitor(s) during construction and restoration activities on the Project Area, and a description of the Environmental Monitor's duties. The programs will describe the locations of all staging areas, temporary spoil or woody debris stockpiles, "extra work" areas, and other places material or equipment may be placed on site. The limits of disturbance around all such areas will be clearly defined in plan maps, and physically marked in the field using orange construction fencing or other similar indicators. Plans to restore all temporary disturbances in regulated areas, including replanting trees in disturbed forested areas, will be provided. The final programs will be submitted in the Compliance Filing.

(o) An identification of State and Federal endangered or threatened species, SSC and SGCN, and their habitats within the Project Area or that could be subject to direct or indirect

impacts from the Project construction, operation, post-construction restoration, or maintenance, including incidental takings will be presented in the Application. Additionally:

(1) If the Applicant determines that impacts to T&E species within the Project's limits of disturbance are unavoidable, a clear and reasoned explanation will be provided as to why complete avoidance of impacts to each affected T&E species is not practicable, how the proposed minimization actions will minimize impacts to the maximum extent practicable, and proposed mitigation actions where impacts cannot be avoided or secondly minimized. If any such impacts cannot be demonstrably avoided to the maximum extent practicable, minimization actions and mitigation measures to be implemented will be contained in a proposed Net Conservation Benefit Plan to be presented in the Application, and finalized for the Compliance Filing in consultation with NYSDEC, NYSDPS, and USFWS (if Federally-listed species may be impacted) to result in a net conservation benefit to the target species, and thorough post-construction monitoring will take place to adequately measure the Project's direct and indirect impacts on the target species and evaluate the effectiveness of measures implemented as minimization actions.

(2) Analysis and documentation of T&E species, SSC, and SGCN will be included based on database records obtained from the NHP, other known records documented by NYSDEC, USFWS, (if practicable, upon notice to USFWS as to the estimated filing date of the application) and observation during on-site wildlife and habitat, ecological, and wetland surveys. If the Applicant determines that there will be a "take" of a threatened and/or endangered species as a result of the Project, then a draft Net Conservation Benefit Plan will be included in the Application. If it is determined by the Siting Board that a "take" of a listed T&E species is unavoidable, including the adverse modification of habitat on which a listed T&E species depends, an avoidance, minimization, and mitigation plan will be filed in the Compliance Filing that demonstrates a net conservation benefit to the affected listed T&E species as defined pursuant to 6 NYCRR Part 182.11, along with the informational requirements of an Incidental Take Permit as provided for in 6 NYCRR Part 182.11, including proposed actions to first avoid all impacts to listed T&E species will be prepared. The Application will include a discussion

and analysis of information collected as part of pre-construction monitoring surveys within the Project Area.

(3) A table of State listed species, Federally listed species, SSC, and SGCN, occurring or likely to occur within the Project Area will be included with the following columns:

(i) Species name;

(ii) Federal status;

(iii) NYS status;

(iv) SSC/SGCN listing;

(v) Habitat preference identified according to Ecological Communities of New York State (Edinger et al., 2014);

(vi) Identification of maps from 16 NYCRR § 10001.22(a)(3) that include habitat for each species;

(vii) Source of information indicating potential or documented presence of species;

(viii) Indication if species was observed onsite;

(4) The following items will be addressed in a narrative form following the above-mentioned table:

(i) Discussion of the type of impact (direct and/or indirect) that may occur to each listed species;

(ii) Estimated take of each listed species; and

(iii) Evaluation of all impact avoidance measures considered and, if full avoidance is not feasible, a discussion of why such actions are not practicable.

(p) An ISMCP 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. The ISMCP will address species that were both identified in the invasive species concentration areas during the wetland delineation effort within the Project Area as well as those listed in 6 NYCRR Part 575. Management and control measures included in the Plan will vary depending on invasive species type identified during the field efforts. The Plan will include:

(1) A list of all non-native invasive species observed during field investigations and known to occur within the Facility Area. The list of invasive plant species in areas of proposed disturbance shall be based on observations recorded concurrent with field surveys.

(2) For areas of high invasive species density and as useful for management of individual invasive species, identification of an area and concentration threshold that requires mapping and an individual management plan. GIS files of such concentration areas will be provided to NYSDEC.

(3) A list of invasive species other than plants included in 6 NYCRR § 575.3 and § 575.4 (http://www.dec.ny.gov/docs/lands_forests_pdf/islist.pdf), if any, limited to those incidentally observed during field work, including maps at a scale of 1:1,200 of any identified concentrations of non-native invasive species in areas of proposed disturbance. Additional invasive species not included on this list [e.g., wild parsnip (*Pastinaca sativa*), reed canary grass (*Phalaris arundinacea*)] may also warrant specific management and control measures, depending on currant populations of such species within and nearby the Project Area.

(4) A preliminary ISMCP will be included with the Application and a final ISMCP shall be provided as a Compliance Filing or an Informational Filing with the Secretary, as applicable. Specifically, the plan will apply to all prohibited and regulated invasive species and include the following:

    (i) A summary of the survey methods to be used to identify and mark existing non-native invasive species within the Project Area (i.e., baseline survey, including the transmission line corridor (if applicable). A field verification of the location(s) of invasive species conducted during the growing season

immediately prior (within at least six months) of the start of vegetation or ground disturbance activities;

(ii) An action plan for pre-construction management of non-native invasive species, including threshold for action. Specific methods to be used to ensure that packing material, imported fill and fill leaving the Project Area will be free of non-native invasive species material, seeds, and parts to the extent practicable;

(iii) Specification on how fill materials to be placed within the Project Area will be free of non-native invasive species material, seeds, and parts, by source inspection or other method, or only used within areas already containing those specific non-native invasive plant and invertebrate species infestation;

(iv) Detailed description of specific measures that will be used to prevent the introduction, spread, and proliferation of all non-native invasive species due to the implementation of the Facility's grading, erosion and sediment control plan;

(v) Details of procedures for preventing the spread of invasive invertebrates and diseases, and a discussion of how the Applicant will comply with the NYS quarantine and protective zones, where applicable;

(vi) Detailed plans describing how appropriate measures will be implemented to ensure that equipment and personnel arrive at and depart from the Project Area clean and free of all non-native invasive species material, seeds, and parts. The protocol for inspection of equipment arriving at the Project Area will be provided in the Application;

(vii) A detailed description of cleaning procedures for removing non-native invasive species material, seeds, and parts from equipment and personnel, and properly disposing of materials known to be or suspected of being infested;

(viii) Detailed description of the BMPs or procedures that will be implemented, and the education measures that will be used to educate workers;

(ix) Detailed description of a minimum of 5-year post-construction monitoring and corrective action plan, to achieve the goal of no new invasive species in the Project Area and no new locations of existing invasive species in the Project Area, and survey measures and procedures for revising the ISMCP in the event that the goals of the initial plan are not met within a specified timeframe;

(x) Anticipated methods and procedures, incorporating input from consultation with NYSDEC and NYSDPS Staff, used to treat non-native invasive species that have been introduced or spread as a result of the construction, operation or maintenance of the Facility (based on comparisons against the baseline survey); and

(xi) Landscape re-vegetation plans, including specification of native seed mix to be used, as appropriate.

(q) An analysis of the temporary and permanent impacts of the construction and operation of the Project and interconnections on agricultural resources, including the current agricultural use of the Project Area, if any, including 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. This analysis will include reference to the NYSDAM guidance document entitled *Guidelines for Solar Energy Projects – Construction Mitigation for Lands* dated October 18, 2019. If for any reason guidelines cannot be met, NYSDAM will be contacted to discuss applicable alternatives.

(1) A description of a proposed Agricultural Monitoring Plan to be utilized by a single environmental monitor duly qualified in agricultural practices during construction and restoration, as well as during decommissioning of the Project.

3.23 Aquatic Ecology and Water Resources (Exhibit 23)

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

Groundwater

A preliminary review of the Project Area indicates that the depth to water table for the 23 soils mapped in the Project Area by the NRCS ranges from 0 inches (surface) to greater than 80 inches. Nine of the soil map units have a depth to a restrictive layer of 10 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, 2020).

The USGS and the NYSDEC define primary aquifers as "highly productive aquifers presently utilized as sources of water supply by major municipal water supply systems" (NYSDEC, 1990). Based on a preliminary review, no portion of any primary aquifer is located within the Project Area boundaries. The nearest primary aquifer to the Project Area is the valley-fill aquifer located in the Sprout and Fishkill Creeks area, approximately 31 miles southwest of the Project Area.

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 on a preliminary review, a portion of the central and southeastern Project Area boundary are located above a principal aquifer (New York and New England carbonate-rock aquifer).

The Hudson-Mohawk sheet of the "Potential Yields of Wells in Unconsolidated Aquifers in Upstate New York" map indicates the presence of unconsolidated groundwater aquifers beneath the Project Area (see Figure 10). This aquifer is identified as an Unconfined Aquifer with a potential yield of "10 to 100 gallons per minute comprised of sand and gravel with saturated zone generally less than 10 feet thick, or thicker, but with less permeable silty sand and gravel." No aquifers of unknown potential are located within the Project Area (Bugliosi, 1988).

The Application will include 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 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 Columbia County Public Health Department and the NYSDEC to request access to all publicly available water well information. The Application will include information received from the NYSDEC and Columbia County on water wells, including location, depth, yield, and use, if such data are available. Figure 11 provides preliminary identification of currently mapped water wells. Additionally, the Applicant plans to conduct a private well survey to further identify information on water wells within the vicinity of the Project Area. The survey will query all landowners within a 500-foot radius of the proposed Project Area and within a 2,000-foot radius of proposed pile driving (and blasting, if applicable) for information regarding their private water wells for inclusion in the Application.

Excavations for foundations and roadways 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 will not occur in close proximity to residential drinking water wells. Construction of the Project will adhere to a 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 impacts arising from any necessary dewatering for construction activities.

Though none are anticipated, an analysis of 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 minimization 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 Columbia County data, as well as data collected for streams during ongoing site-specific wetland and waterbody delineation surveys.

The Project Area is located within the Middle Hudson drainage basin of the New York USGS Hydrologic Unit Code 02020006 and the Claverack Creek Watershed (Hydrologic Unit Code 0202000605). According to the USDA NRCS, the Middle Hudson drainage basin is located just west of the Massachusetts state line straddling the Hudson River, covers the area from Albany south to Kingston, and occupies approximately 1,553,779 acres. This basin includes portions of Albany, Columbia, Dutchess, Greene, Rensselaer, Schenectady, Schoharie and Ulster Counties as well as a small portion of Berkshire County Massachusetts.

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 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.

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 reference maps, and which are not specifically classified by the NYSDEC, are assigned the same

classes and standards of quality and purity as the specifically designated waters to which they are a direct tributary. Additionally, 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 continuous flowing natural streams that are not shown on the reference maps are assigned the same classification and standards as the waters to which they are directly tributary (6 CRR-NY 876.2).

A Wetland and Waterbody Delineation Report, which will be appended to the Application, will describe the characteristics of delineated streams. The report will include a summary of each streams' flow regime, watershed association, NWI classification, physical characteristics (e.g., bed, banks, etc.), and assumed jurisdictional status. Figure 12 shows their mapped locations. All of the streams are part of the watershed identified as Hydrologic Unit Code 020200060504. The design goal of the Project is to minimize, to the maximum extent practicable, impacts to wetlands and streams.

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 publicly available mapping, and initial on-site ecological surveys, there are multiple streams within the Project Area. A majority of the streams identified on-site are NYSDEC Class C(T) and C(TS) classified. 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 anticipated direct or indirect stream impacts associated with the construction of the Project. 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, when possible, and using 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 downstream surface drinking water intake sites within one mile of the Project Area will be sent to the Columbia 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 will be incorporated into the SPDES General Permit for the Project 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 to inspect and assess sedimentation risk, and to mitigate unforeseen issues specific to the nature of the Project Area.

Stormwater

The Applicant will issue a Notice of Intent for Stormwater Discharges from Construction Activity and will seek authorization 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 Standards and Specifications for Erosion and Sediment Control (SSESC) 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 SWPPP 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. Construction activities will adhere to the SWPPP for management of stormwater discharge within the Project Area during the construction and restoration phases of

the Project. The erosion and sedimentation control plan will be developed as part of the SPDES General Permit for the Project. The SWPPP will provide descriptions on temporary and permanent erosion and sedimentation control measures, phases of construction, disturbance limits, waste management, spill prevention, and site inspection and maintenance. Erosion and sedimentation control measures used during construction and operation of the Project shall, at a minimum, include the measures set forth in the SWPPP.

Professional engineers will use hydrologic models to calculate stormwater discharges for the construction and operation phases of the Project. A pre-construction analysis of stormwater discharge from the Project Area will be used 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 phases of the Project to prevent the release of hazardous substances into the environment, especially near water resources. As noted above, all refueling operations will be required to occur outside 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 petroleum or other hazardous chemicals that are necessary for construction operations, as well as are proposed to be stored on site. The Application will also explain that 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 ISMCP will be generated and used to mitigate the transport and spread of observed aquatic invasive species. The ISMCP will be included as an appendix to the Application.

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

Cooling Water

The Project will not use 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 the Project.

Proposed Exhibit 23 Contents

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

Exhibit 23 shall contain the following with regard to:

(a) Groundwater:

(1) Hydrologic information reporting depths to high groundwater and bedrock, including a site map showing depth to high groundwater in increments appropriate for the Project 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 within a 500-foot radius of the proposed Facility Area

(and within a 2,000-foot radius of blasting locations and pile driving locations, as applicable), and including delineation of wellhead and aquifer protection zones. Well locations will be distinguished as "approximate" or "confirmed."

(i) To identify water wells within the Project Area, a FOIL request letter, will be sent to the Columbia County Public Health Department and NYSDEC to request access to all publicly available water well information. The Applicant will also submit, a FOIL request letter to NYSDOH. Copies of the FOIL request letters, and any information gained thereof, will be included in the Application. Well construction details, usage patterns, and water quality data will be obtained to the extent that it is publicly available through these agencies for wells located within 500 feet of the Project Area, and within 2,000 feet of any planned blasting locations and post installation locations (if applicable).

(ii) The Applicant will attempt to implement the following verification and maps:

(a) Locations of public and private water wells through field observations where property access rights are obtained by the Applicant.

(b) Maps showing water well locations will distinguish whether each well location is approximate or confirmed.

(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, and 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.

(4) The results of a private well survey distributed to all landowners within a 500-foot radius of the proposed Project Area and within a 2,000-foot radius of proposed blasting and pile driving locations (if applicable). The water well survey materials will include a summary of the Project, contact information, and a description of where the well owner can get more information about the Project (i.e., project

website, document repositories, etc.), as well as an invitation to join the stakeholder list.

(b) Surface Water:

(1) A map and identification of all surface waters, including perennial, intermittent, and ephemeral streams, within the Study Area. Surface water maps will be based on data from NYSDEC, ESRI, USGS, NWI, and stream data collected during on-site surveys of water resources. On-site survey data for surface waters will be provided to NYSDEC and NYSDPS as shapefiles and in tabular format that can be cross-referenced to the maps.

(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, minimization measures, including the use of water storage, stormwater reuse, and offsetting water conservation, regarding groundwater impacts.

(6) A list and evaluation of reasonable avoidance and minimization measures, and the potential alternatives to avoid impacts to wetlands and streams, including stream crossings, to the maximum extent practicable. Environmental impacts discussed and addressed will include, as applicable: thermal changes to waterbodies due to vegetative clearing, changes to in-stream structure and morphology, potential impacts to or taking of State-listed T&E, SSC, and SGCN, and the effects of turbidity on nearby aquatic habitat.

(7) Culvert placement specifications will be described and enumerated, detail the expected flow calculations, and demonstrate culvert capacity with BMP considerations for culvert placement. The feasibility of using trenchless stream crossings will be assessed for all streams proposed to be crossed. BMPs will be utilized year-round for all stream crossings. Where impacts are deemed unavoidable, proposed measures to minimize impacts to the maximum extent practicable will be discussed. BMP procedures will also be documented in the Project's SWPPP, described in the Application and presented in the Compliance Filing or filed with the Secretary upon verification of wetland boundaries and jurisdictional determinations. Final impact calculations will be based on verified delineation boundaries for jurisdictional wetlands.

(c) Stormwater:

(1) A preliminary SWPPP for the collection and management of stormwater discharges from the Project prepared in accordance with the applicable SPDES General Permit for Stormwater Discharges from Construction Activity, the most current versions of the SSESC and the New York State Stormwater Management Design Manual. All the components of the final SWPPP, which are enumerated within Part III.B of the Construction General Permit (currently GP-0-20-001) will be included within the final SWPPP (not cross-referenced within Article 10 Application exhibits or appendices) so the final SWPPP can be used as a stand-alone document that will be kept at the construction site as described in the Construction General Permit part II.C.2.

(i) The hydrogeology of the Project Area will be taken into consideration when preparing the SWPPP. The SWPPP will include a description of proposed measures of prevention of ecological impacts to these areas to the maximum

extent practicable, and pre- and post-development hydrologic modeling and water quality calculations.

(ii) An evaluation of potential impacts of stormwater runoff on both agricultural uses and drainage patterns within and adjacent to the Project Area. The Application will also address the preliminary design of stormwater controls and draining features used during site restoration, in light of avoiding post-construction negative impacts on the mentioned resources.

(iii) Proposed BMPs will be documented in the SWPPP to be included in the Application. BMPs will be utilized year-round for access roads and trenching locations along and across steep slopes. Likewise, BMP procedures will be documented in the preliminary SWPPP.

(2) If the Project is not eligible for coverage under the SPDES General Permit, a completed application for an individual SPDES Permit for the collection and management of stormwater discharges from the Project will be submitted.

(3) 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 Stormwater Management Design Manual (SWMDM) and SSESC, 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.

(4) The application will include an analysis and discussion of whether the project is classified as a "Scenario 1" (solar) project or "Scenario 2" (solar) project as per the NYSDEC April 5, 2018 "Solar Panel Construction Stormwater Permitting/SWPPP Guidance" memo. The discussion will identify how the criteria outlined in the Maryland "Stormwater Design Guidance – Solar Panel Installations" referenced in the NYSDEC memo will be met.

(5) If it is determined that the project is a "Scenario 2" (solar) project the SWPPP for this type of project must address post-construction stormwater practices designed in accordance with the sizing criteria in Chapter 4 of the NYS Stormwater Management Design Manual, dated January 2015. The application will include

statements indicating whether the project is located within and subject to the requirements of a regulated, traditional land use control of a Municipal Separate Storm Sewer System (MS4) area.

(6) The application will include statements indicating whether the Applicant intends to request a waiver to disturb five acres or more of soil at any one time.

(7) The application will include statements indicating whether the project is located within and subject to the requirements of a regulated, traditional land use control of a MS4 area. The Final SWPPP will include an erosion and sediment control plan as required per the SPDES General Permit (or individual SPDES permit) to limit the possibility of off-site impacts, and to minimize, to the maximum extent practicable, soil erosion and sedimentation within water resources throughout the Project Area, and will be provided as part of a Compliance Filing or filed with the Secretary.

(8) The Application will include an evaluation of potential impacts of stormwater runoff on agricultural uses and drainage patterns within and surrounding the Facility Area. The Application will also address design of stormwater controls, and draining features used during site restoration, in light of avoiding post-construction negative impacts to water well and surrounding agricultural land uses.

(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, minimization 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 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. For the investigations of visual impacts, a 5-mile radius will be applied as a VSA (not extending beyond the New York State boundary). During the pre-application phase, and once a solar array layout has been determined, the Applicant will prepare a preliminary viewshed analysis for the purpose of defining the appropriate VSA and APE for Historic Architectural Studies. This preliminary viewshed analysis will be distributed to involved parties (as discussed in Proposed Exhibit Contents 24(b)(5) below).

The definition of the VSA for initial evaluations is currently proposed to be around the limits of the property boundary of the Project Area and not around the general perimeter outline of the solar array themselves in order to allow modifications to the solar layout. The final VSA will be modified to reflect area around the fence line of the final solar array footprint. Distance Zones required by Article 10 are Project distances to an observer. Three distance zones will be applied to the Project: Zone 1) foreground at 0.5 miles, Zone 2) middleground 0.5 to 2.0 miles, and Zone 3) background 2.0 to 5.0 miles where each of these zones help define the level of detail and acuity of the Project. Towns that fall within the distance zones are as follows:

- *Towns within 0.5 miles:* Copake, Taghkanic Hillsdale
- *Towns that fall between 0.5 and 2 miles:* Copake, Taghkanic, Hillsdale, Claverack
- *Towns that fall between 2 and 5 miles:* Copake, Taghkanic, Hillsdale, Claverack

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 within the property boundary is predominantly a mix of forested and open land with few travel corridors. The Taghkanic Creek runs north, south, and east through the Project boundary.

Physiographically, the VSA is within the Taconic Mountains province. The Taconic Mountains province is generally characterized by rugged mountains, rocky ridges, and valleys. There are some surrounding hills within the VSA from which the viewshed will be analyzed for significant views from higher elevations looking down on the Project.

A visual resources inventory as generally stated in 16 NYCRR § 1001.24(b)(4)(ii) will be performed to determine the existing publicly accessible sensitive resources that may be susceptible to visual impacts. A final assessment of resources will be provided with the Article 10 Application.

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 using ESRI ArcGIS Spatial software and will include vegetated tree groups (as available) to realistically depict the surrounding landscape. This analysis is a GIS analytical technique that allows one to determine if and where an object can geographically be seen within a larger regional area. 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 of 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 NYSDPS 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 Aboveground Structures and Interconnections

The proposed collection substation and interconnection facilities (inclusive of a potential energy storage system) are proposed to be built by the Applicant. Analyses will be performed to determine the visibility of the collector station from public vantage points.

Appearance of the Facility Upon Completion

Photosimulations will be prepared from selected vantage points 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 the site visit tasks for use in the simulations.

Photographic Overlays

Photographic simulations will be prepared from final chosen representative viewpoints. 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 GPS unit. If necessary, 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 Project within the photograph.

Nature and Degree of Visual Change

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 potential 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. The simulations of existing and proposed conditions will be provided to assess the quality of views and what the Project will look like from various Landscape Similarity and Distance Zones. Simulations will be made from vantage points from public areas with the most open views to the Project as possible.

Additionally, per 16 NYCRR § 1001.24(b)(7), each set of existing and simulated views of the Facility will be compared and rated. Documentation of the steps followed in the rating and

assessment methodology will be provided including results and summary discussion of rating impacts and a description of the qualifications of the individuals serving on the rating panel.

There is no standard rating form that is required by NYSDPS. TRC has developed a visual impact rating form for use in comparing Project photosimulations for efficient and streamlined use with projects that undergo State environmental permitting processes. This form is a simplified version of various Federal agency visual impact rating systems. It includes concepts and applications sourced from:

- U.S. Bureau of Land Management (BLM), Handbook H-8431: Visual Contrast Rating, January 1986 (U.S. Department of Interior [DOI], 1986).
- Visual Resources Assessment Procedure for USACE, March 1988 (Smardon, et al., 1988)
- NPS Visual Resources Inventory View Importance Rating Guide, 2016 (NPS, 2016c).
- USDA Forest Service (USFS), United States Department of Agriculture Forest Service, Landscape Aesthetics: A Handbook for Scenery Management. USDA Forest Service Agriculture Handbook No. 701, 1995 (USDA, 1995).

Related Operational Effects of the 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

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). As cited by this regulation, these are areas such as landmark landscapes; wild, scenic, or recreational rivers administered respectively by either the NYSDEC or DOI 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 Exhibit 24 Contents

The Applicant proposes to collect, evaluate, and provide the following information to support and prepare Exhibit 24 of the Application in accordance with 16 NYCRR § 1001.24 and as applicable to solar development:

(a) The Application will include a VIA to determine the extent and assess the significance of Project visibility within a 5-mile VSA. Significant visual resources beyond the 5-mile Study Area will be considered as well. 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 aboveground 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 Project 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 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 aboveground 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. The Sandia National Labs Solar Glare Hazard Analysis Tool (SGHAT) method or equivalent will be used for this glare analysis. The scope and methodology for the Glare Analysis will include a discussion of the use of galvanized steel for the racking system. No plumes, shading, or shadow flicker are anticipated.

(10) Proposed reasonable mitigation measures based on an assessment of mitigation strategies including screening (landscaping, listing species used, and the consideration of usage of native species), architectural design, visual offsets, relocation or rearranging Project components, reduction of Project Facility profiles, alternative technologies, Project color and design, lighting options for work areas and safety requirements, and lighting options for aviation obstruction lighting if required by the Federal Aviation Administration (FAA).

(11) A description of all visual resources that would be affected by the Project that are within a radius of at least five miles from the Project fence line, or otherwise predicted visibility by viewshed analysis.

(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. Publicly accessible visually-sensitive sites, cultural and historical resources, representative viewpoints, and public vantage points within the five-mile VSA 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 VSA, 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 VSA.

(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, NYSDPS, NYSDEC, and OPRHP (Visual Stakeholders). Viewpoint selection will be based upon the following criteria:

(i) Representative or typical views from unobstructed or direct line-of-sight views as possible from locations predicted to have direct line-of-sight visibility of facilities components, based on results of preliminary viewshed mapping;

(ii) Significance of viewpoints that are publicly accessible 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 United States Code (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 properties; 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;

(vi) Consultations with, and any feedback from, the Visual Stakeholders, which includes municipalities within the five-mile VSA having predicted visibility of the Project; and

(vii) The Applicant will provide a listing of Eligible Historic Sites with corresponding Unique Site Numbers (USNs). Most data for eligible sites are already on the NY CRIS system in the form of site plans, pictures, and written forms. The USNs can be cross-reference to the data that SHPO and OPRHP already haves in their system.

(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 NYSDEC, NYSDPS, 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. 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.

(i) The Applicant will provide either leaf-off photographs or leaf-off photographic simulations from representative viewpoints as determined through additional consultations, having direct line-of-sight visibility of the Project, viewing circumstance with respect to vegetative obstructions (e.g., leaf-off conditions are not as critical with wide open agricultural land views), and within the scope of Article 10 regulations.

(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 Project are identified, potential mitigation measures shall be outlined, and the extent to which they effectively minimize such impact shall be addressed. The Applicant will utilize a visual impact rating form for comparing project photo simulations. This form is a simplified version of various Federal agency visual impact rating systems.

(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.

(10) Documentation of the identification and outreach to Visual Stakeholders pursuant to 16 NYCRR § 1001.24(b)(4). This outreach documentation should demonstrate that the Applicant (a) distributed a request to the Visual Stakeholders, (b) distributed a report/ memorandum related to recommendations for Visual Simulations to the Visual Stakeholders following its visual fieldwork and associated data processing, and (c) solicited comments from the Visual Stakeholders on the viewpoints selected. The Visual Stakeholders identified by the Applicant will be added to the Master Stakeholder list; and the Applicant will include copies of its viewpoint selection correspondence to these stakeholders in the Application.

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 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 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 as part of these descriptions. 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 during Project construction. Most construction deliveries are anticipated to occur using flatbed trucks. 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 for use, along with the associated vehicle weights, and estimated numbers of daily round trips for each construction vehicle.

Once construction of the Project is complete, transportation levels during operation 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 will typically involve 1-2 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 within the limited location. The Project owner is responsible for the maintenance of all private access roads utilized for access to the solar arrays. The Application will provide O&M procedures that will include 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 assist in the impact assessment on emergency services, Exhibit 25 will include a map showing the locations of emergency service providers relative to the Study Area.

Proposed Exhibit 25 Contents

The Applicant proposes to collect, evaluate, and provide the following information to support and prepare Exhibit 25 of the Application in accordance with 16 NYCRR § 1001.25:

Exhibit 25 shall contain:

(a) A conceptual site plan, drawn at an appropriate scale, depicting all Project Area 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, and 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, if applicable), chemicals or hazardous materials for construction or operation of the Project will not be presented in the Application because deliveries of these materials are 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) Should oversize load deliveries 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.

(i) The Applicant will consider any overweight/oversize permitting and road feasibility issues for delivery of transformers and other substation and POI related equipment, as applicable.

(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. If road use agreements are not executed, the Application will describe alternative provisions for municipalities regarding damage of roads, or other infrastructure, due to construction activities associated with the Project. The Applicant will discuss with the County any required permitting for County rights-of-way.

(e) An analysis and evaluation of the impacts of the Facility on senior transportation, the Columbia County Public Transportation services, and other mass transit systems will be presented in the Application. 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 FAA 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 FAA in accordance with 14 Code of Federal Regulations, Part 77 pursuant to 49 U.S.C., § 44718.

(g) Should the Project require off-site improvements, these will be assessed in the Application.

3.26 Effects on Communication (Exhibit 26)

The Project is not anticipated to interfere with any existing communication systems. The Project will lack tall structures and exposed moving parts, and it is anticipated that it will generate only very weak electric and magnetic fields (EMF) at the property boundaries, if any. The Application will document publicly known communication sources above and below ground within a two-mile radius of the Study Area, where affected sources are not limited to a 2-mile radius from the Project Area boundaries, including the following:

- Underground cables and fiber optic lines;
- AM radio stations;
- FM radio stations;
- Television stations;
- Telephone systems;
- Microwave transmission;
- Emergency services communication systems, municipal/school district services, public utility services;
- Doppler/weather radar;
- Air traffic control (affected sources);
- Department of Defense (DOD)/Armed Forces (affected sources);
- Global positioning systems, long range navigation (LORAN) (affected sources);
- Amateur radio licenses registered to users

The Applicant will attempt to identify any underground cables or fiber optic lines within 2 miles of the Project Area if they are found to exist. Prior to construction, the Applicant will submit a "design ticket" to Dig Safe New York (DSNY), which will initiate a process in which utilities and DSNY provide relevant mapping to the Applicant. The Project will avoid impacts to underground cables or fiber optic lines.

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

A Complaint Resolution Plan, which will developed for the Application, will be available to resolve issues and complaints that may arise within the local community, largely on an individual basis. The Complaint Resolution Plan will outline the steps for investigation and resolution of such complaints.

Proposed Exhibit 26 Contents

The Applicant proposes to collect, evaluate, and provide the following information to support and prepare Exhibit 26 of the Application in accordance with 16 NYCRR § 1001.26:

(a) The Applicant will consult with the Columbia County Emergency Management Office, Columbia 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 all Project Area boundaries and the electric interconnection between the Project and the POI, unless otherwise noted, including:

(1) AM radio stations;

(2) FM radio stations;

(3) Television;

(4) Telephone;

(5) Microwave transmission (all affected sources, not limited to a two-mile radius from all Project Area boundaries);

(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 from all Project Area boundaries);

(10) Air traffic control (all affected sources, not limited to a two-mile radius from all Project Area boundaries);

(11) Armed forces (all affected sources, not limited to a two-mile radius from all Project Area boundaries);

(12) Global positioning systems (GPS);

(13) Long-range navigation (LORAN) (all affected sources, not limited to a two-mile radius from all Project Area boundaries); and

(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 Project and the electric interconnection between the Project and POI. The Project will avoid any impacts to underground cables or fiber optic lines. The Applicant will contact Columbia County to confirm identification of any fiber potentially connecting radio towers.

(c) A statement describing the anticipated effects of the Project and the electric interconnection between the Project and the POI 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 Dig Safely New York (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 Project and electric interconnection between the Project and the POI 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 Project and interconnection facilities (inclusive of a potential energy storage system).

(f) There are no wind power facilities as part of the Project, therefore this section of the Exhibit 26 regulation is not applicable.

3.27 Socioeconomics Effects (Exhibit 27)

The Project's construction, operation, and maintenance phases will be analyzed to determine the socioeconomic effects in the vicinity of the Town of Copake. Economic impacts will be evaluated and described in the Article 10 Application, in compliance with Exhibit 27 requirements in 16 NYCRR § 1001.27, to determine potential socioeconomic impacts of the Project, including:

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 Project.

B. Direct effects

Direct effects of the Project include payroll and other expenditures. Local expenditures within the general area of Columbia County and New York's Capital Region 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 provided in Exhibit 27 of the Application.

C. Indirect and induced effects

Indirect impacts are economic effects associated with linked sectors in the economy that are upstream of the direct impacts, such as suppliers of hardware used to make the equipment installed onsite. Induced effects occur as money is recirculated through household spending patterns, generating additional local economic activity. A range of estimates of the indirect and induced effects will be presented in Exhibit 27 of the Application. A qualitative discussion will address the annual net secondary effects from Facility construction.

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 Project 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. A range of estimates of the indirect and induced effects will be presented in Exhibit 27 of the Application. Additionally, a qualitative discussion will address the annual net secondary effects from Project operation.

F. Construction and operation school district impacts:

The Project encourages hiring local employees to fill temporary construction positions, as well as permanent operation 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:

The Applicant will coordinate with the utilities and emergency service providers for the Town of Copake to ensure that public services and health and safety are not negatively impacted by the Project. The Columbia County Sheriff's office, New York State Police, and local fire and ambulance departments have adequate resources to monitor vehicular traffic from construction and operations activities on area roads, to address routine medical needs, and to address any security issues related to vandalism that may occur.

The Project 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.

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. The Project will continue to coordinate with municipal officials and emergency service providers and provide an update to this information in Exhibit 27 of the Application, including

training needs or equipment deficiencies that may be identified to address any contingency plans for emergency response.

The Project will have no need for potable water connection or wastewater connection. Local roadways will be returned to at least pre-existing conditions following the completion of construction, if necessary. Waste disposal will be limited to small amounts of solid waste (paper, rags, packing cardboard, discarded parts) and will be disposed of properly by Project work crews in designated disposal receptacles, then taken off-site to properly licensed landfills.

H. Designated tax jurisdiction, tax and payment impacts

The following entities have tax assessment jurisdiction on parcels within the Project Area (see Figure 13 for locational reference):

- Columbia County,
- Town of Copake,
- Taconic Hills Central School District, and
- Craryville Fire District.

Shepherd's Run Solar anticipates that these entities will benefit from taxes on Project components sited within their jurisdictions. The Applicant anticipates entering into a payment in lieu of taxes (PILOT) agreement and/or Host Community Agreement. The Project will continue to coordinate with and provide an update to municipal officials 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 will either be privately funded or entered into a PPA contract 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 Exhibit 27 Contents

The Applicant proposes to collect, evaluate, and provide the following information to support and prepare Exhibit 27 of the Application in accordance with 16 NYCRR § 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. This estimate will be based on the actual number of jobs budgeted for the Project, as well as the Applicant's prior industry experience with similarly situated projects.

(b) An estimate of the annual construction payroll, by trade, for of the period of construction and an estimate of annual direct non-payroll expenditures likely to be made in the vicinity of the Project (materials, services, rentals, and similar categories) during the period of construction.

(c) A range of estimates of the annual secondary employment and economic activity likely to be generated in the vicinity of the Project by the construction of the Project, to reflect the uncertainty associated with such, possibly multiplier-based, secondary impact estimates. A qualitative discussion will address the annual net secondary effects from Project construction.

(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 Facility during a typical year of operation. The Applicant should rely, as much as practicable, on the actual number of jobs budgeted for the Project, as well as the Applicant's prior industry experience with similarly situated projects.

(e) A range of estimates of the annual secondary employment and secondary economic activity likely to be generated in the vicinity of the Facility by its operation, to reflect the uncertainty associated with such possibly multiplier-based, secondary impact estimates. A qualitative discussion will address the annual net secondary effects from Project operation.

(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 affected municipalities, public authorities, and utilities).

(h) An identification of jurisdictions that levy real property taxes or benefit assessments or user fees upon the Project Area, 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, benefit charges and user charges) projected to be levied against the post-construction Facility, 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 Facility and interconnections are consistent with each of the applicable State smart growth public infrastructure criteria specified in ECL § 6-0107, or why compliance would be impracticable.

(m) A summary of available information on the feasibility of providing local access to energy generation by the Project.

(n) A commitment by the Applicant to track and report the actual number of direct jobs created during the construction and operational phases of the Project, as well as the tax payments to local jurisdictions made during the course of the Project.

(o) The Applicant will make available any workpapers associated with its socioeconomic impact estimates.

3.28 Environmental Justice (Exhibit 28)

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

- 51.1 percent or more of the population in an urban area reported themselves to be members of minority groups;[1] or
- 33.8 percent or more of the population in a rural area reported themselves to be members of minority groups; or
- 23.59 percent 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 Project Area, is contained within Census Block Group 1, Tract 16, Census Block Group 2, Tract 15, and Census Block Group 2, Tract 9 in Columbia County, New York. According to the most current data from the U.S. Census Bureau's American Community Survey,[2] Block Group 1, Tract 16 has a low-income population of 2.4 percent and a minority (non-white and/or Hispanic) population of 9.5 percent, while Block Group 2, Tract 15 has a low-income population of 11.1 percent and a minority population of 6.9 percent, and Block Group 2, Tract 9 has a low-income population of 12.9 percent and a minority population of 4.3 percent (United States Census Bureau, 2020). Based on the review of the minority and low-income population of the Census Block Group, the proposed location is not in a Potential EJA as defined by the State of New York. A review of NYSDEC's mapped Potential EJAs indicates that the Project is not located in a Potential EJA (NYSDEC, 2000).

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 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

[1] *Minority population* means a population that is identified or recognized by the U.S. Census Bureau as Hispanic, African-American or Black, American Indian, Alaska Native, Asian, Native Hawaiian, Other Pacific Islander, or some other race.
[2] Data presented are 2014-2018 5-year ACS data.

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 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.

Proposed Exhibit 28 Contents

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 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 any EJ areas due to distance, the Project will not negatively any 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 to essentially return the Project Area to substantially its pre-construction condition so that it is available for agriculture and other open space usage, as determined by the landowner.

Decommissioning of the Project is, in many ways, the reverse of its construction. Much of the same equipment that was used 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 Applicant 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 underground sections will be abandoned in place 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 and may be applicable as determined by the Siting Board. Collection cable support 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. Access roads will be left in place for the use of the landowners or removed at the landowners' discretion if they do not intend to make use of the access roads. Disturbed areas will be regraded, topsoiled, and seeded unless the owner has other planned uses for the property. It is anticipated that the decommissioning of the Project would take six months to a year to complete (more if any additional permitting is required).

If conditions permit, after the useful life of the Project, the Applicant may "repower" the Project. When a location with a reliable solar resource and sufficient transmission capacity is identified, combined with landowners and a community willing to host a solar energy project, the Applicant

wants to stay in that area and produce solar energy for as long as possible. Regardless, the Applicant will be prepared to decommission the Project and fulfill its obligations when the Project permanently ceases operation.

The Applicant will decommission the project in accordance with the decommissioning plan approved by the Siting Board. 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 Exhibit 29 Contents

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 a defined period of time for determining when to conduct decommissioning and site restoration activities. This plan shall include a detailed preliminary estimate to support the proposed decommissioning and site restoration funding upon termination of operation of the Project based on decommissioning and site restoration costs from similar projects (if similar costs are available). The plan will also include:

(1) A detailed cost estimate for site restoration activities and decommissioning of the Project. In addition, the Application will include the proposed type of, and justification for, the financial assurance that will be provided for decommissioning and restoration.

(2) A procedure and schedule for notifying local municipalities and landowners prior to decommissioning and restoration activities.

(3) A description of proposed agricultural restoration techniques to be utilized during site restoration and decommissioning will be provided in accordance with applicable NYSDAM guidelines, to the maximum extent practicable.

(c) As the Project will be located on lands owned by others, a description of typical site restoration, decommissioning and guaranty/security agreements between the Applicant and landowner, municipality, or other entity, including provisions for Project components, foundations, and electrical collection, transmission, and interconnection facilities (inclusive of a potential energy storage system) will be included.

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

(e) 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 Project. Therefore, this requirement is not applicable to the Project.

3.31 Local Laws and Ordinances (Exhibit 31)

The Project will be located in the Town of Copake, Columbia 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 1996, the Town of Copake adopted its Zoning Code (Zoning Code of the Town of Copake, New York, 2018). The Zoning Code was revised in 2018. The law authorized the Town of Copake to "realize a development plan properly designed to conserve land; to encourage the conservation of energy and the appropriate use of solar and other renewable energy resources; and to assure that development will occur in a reasonable manner, with consideration of land capabilities to support development, and to assure freedom from problems (either current or future) associated with inappropriate land development methodologies." Section 232-16.12 of the Zoning Code constitutes the solar energy facilities regulations. The solar energy facilities regulations note that the Town of Copake recognizes that solar energy is a clean, readily available, and renewable energy source and that energy generated from solar energy systems can be used to offset energy demand on the grid where excess solar power is generated.

The Town of Copake would consider the Project a "utility-scale solar system" as it is an "energy-generation facility or area of land principally used to convert solar energy to electricity, whether by photovoltaics, concentrating solar-thermal devices or various experimental solar technologies, designed and intended to supply energy primarily into a utility grid for sale to the general public or to supply multiple users located off the site on which the energy system is located." A special use permit and site plan review by the Planning Board are ordinarily required for utility-scale solar energy systems; however, Article 10 supplants the need to obtain such a permit and review.

A. Local Procedural Requirements to be Implemented by Municipality to be Authorized by the Siting Board

Below is a preliminary list of local laws and ordinances of a procedural nature that may have been applicable to the construction and operation of the Project in the absence of Article 10:

Town of Copake – Solar Energy Facilities (§ 232-16.12):

E. Requirements for utility-scale solar energy systems.

(1) A special use permit and site plan review by the Planning Board shall be required for all utility-scale solar energy systems.

(3) Applications, permits and approvals required and applicable zoning districts.

(a) All applications for utility-scale solar energy systems shall include an application for special use permit and site plan review, and all applicable fees as may be established by the Town Board. Both site plan and special use permit reviews and approvals are required.

(b) All applications for utility-scale solar energy systems shall include the following:

[1] Plans and drawings of the utility-scale solar energy system installation signed by a professional engineer registered in New York State showing the proposed layout of the entire utility-scale solar energy system along with a description of all components, whether on site or off site, existing vegetation and proposed clearing and grading of all sites involved. Clearing and/or grading activities are subject to review by the Planning Board and shall not commence until the issuance of site plan approval.

[2] Plan for clearing and/or grading of the site.

[3] An electrical diagram detailing the utility-scale solar energy system installation, associated components, and electrical interconnection methods, with all disconnects and over-current devices identified.

[4] Documentation of access to the Project Area(s), including location of all access roads, gates, parking areas, and other vehicular accommodations.

[5] A stormwater pollution prevention plan per New York State Department of Environmental Conservation requirements to detail stormwater runoff management and erosion control plans for the site.

[6] Documentation of utility notification, including an electric service order number.

[7] Photo simulations shall be included showing the proposed utility-scale solar energy system in relation to the building/site along with elevation views and dimensions, and manufacturer's specs and photos of the proposed utility-scale solar energy system, solar collectors, and all other components.

[8] Details of the proposed noise that may be generated by inverter fans. The Planning Board shall require a noise analysis to determine potential adverse noise impacts.

[9] Statement co-signed by the applicant and the landowner that the establishment of the proposed utility-scale solar energy system shall not result in a tax penalty, pursuant to § 305 or 306 of the New York State Agriculture and Markets Law, due to the conversion of land to a nonagricultural use, which shall also state the last year, if any, for which the subject lands received an agricultural real property tax exemption; or that the establishment of the proposed utility-scale solar energy system may result in a tax penalty, pursuant to § 305 or 306 of the New York State Agriculture and Markets Law, along with a statement indicating the most recent year, if any, for which the subject lands received an agricultural real property tax exemption, which shall also include a statement of the number of acres to be converted from an agricultural to a nonagricultural use and an estimate of the total amount of tax penalty to be imposed, including interest.

[10] Part I of the full environmental assessment form (FEAF) filled out.

[11] Decommissioning plan and description of financial surety that satisfies the Town of Copake that all required removals of inactive systems shall be completed. The decommissioning plan shall identify the anticipated life of the project, method and process for

removing all components of the utility-scale solar energy system and returning the site to its preexisting condition, and estimated decommissioning costs, including any salvage value. The decommissioning plan applies to applicant and all subsequent owners and operators of the subject parcel or solar energy facility, or their successors.

[12] Identification and contact information of the responsible party to be notified in the event of emergency or for any other reason, including the address for notices of the utility-scale solar energy system owner/operator or designated party to receive notice in the event of decommissioning and removal of the energy system. If the party to receive notices, or the address thereof, changes at any time, the applicant is required to notify the Town Clerk, in writing, of such change. Such information shall also be provided to the fire district within which the energy facility is located.

[13] The Town of Copake shall require any applicant to pay all associated costs for any application review, including but not limited to engineering, legal, environmental, planning, and the review required under SEQRA. When the Planning Board or Zoning Board of Appeals determines that a review is anticipated to require engineering, legal, environmental, or planning costs, they shall provide an estimate to the applicant. Subsequently, funds adequate to cover such estimated costs shall be placed into escrow by the applicant prior to commencement of any further Planning Board or Zoning Board of Appeals review, and shall be replenished or increased at the direction of either of such boards.

(6) Requirements after approvals.

(a) Any post-construction changes or alterations to the utility-scale solar energy system shall be done by amendment to the special use permit and site plan review and approval, with public hearing, and subject to the requirements of this article.

(b) After completion of a utility-scale solar energy system, the applicant shall provide a post-construction certification from a professional engineer registered in New York State that the project complies with applicable codes and industry practices and has been constructed and is operating according to the design plans. The applicant shall further provide certification from the utility that the facility has been inspected and connected.

F. Abandonment or decommissioning of utility-scale solar energy systems.

(1) To ensure the proper removal of utility-scale solar energy systems, a decommissioning plan shall be submitted as part of the special use application. Compliance with this plan shall be made a condition of the issuance of a special use permit under this section. The decommissioning plan applies to the applicant and to any subsequent owner or operator of the subject parcel or solar energy facility, or their successors. A cost estimate detailing the projected cost of executing the decommissioning plan shall be prepared by a professional engineer or contractor. Cost estimates shall take into account inflation. Removal of utility-scale solar energy systems must be completed in accordance with the decommissioning plan.

Town of Copake - Site Plan Review and Approval (§ 232-21)

Town of Copake - Special Use Permits (§ 232-23)

Except with respect to the New York State Uniform Fire Prevention and Building Code, the Project does not request the Siting 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 Copake has a solar energy facilities law, which spells out the requirements for utility-scale solar energy system applications. Below is a preliminary list of local laws and ordinances for the Town of Copake of a substantive nature that may be applicable to the construction and operation of the Project.

Town of Copake – Solar Energy Facilities (§ 232-16.12):

E. Requirements for utility-scale solar energy systems

(2) Utility-scale solar energy systems are prohibited within the Scenic Corridor Overlay Zone.

(4) (a) [1] A minimum parcel size of 15 acres is required for utility-scale solar energy systems.

(4) (a) [2] A utility-scale solar energy system may occupy up to 20% of the area of the parcel on which it is located; provided, however, that the area of land used for any such system shall not exceed 10 acres. This land area shall be deemed to include all land under or between any system components within the general perimeter of the system as a whole, but shall not include the area within the twenty-five-foot buffer between the system components and the surrounding security fencing.

(5) (a) [1] All utility-scale solar energy systems shall adhere to all applicable Town of Copake building, plumbing, electrical, and fire codes.

(5) (a) [2] There shall be a minimum one-hundred-foot buffer between any component of the utility-scale solar energy system and the parcel boundary line.

(5) (a) [3] No component of any utility-scale solar energy system may be located within 150 feet of any roadway, other than a private service road used solely for access to the site of such energy system.

(5) (a) [4] Any site containing a utility-scale solar energy system shall be enclosed by perimeter security fencing, to restrict unauthorized access, at a height of eight feet with "HIGH VOLTAGE" warning placards affixed every 50 feet.

(5) (a) [5] There shall be created and maintained within the security fence, and between such fence and the components, structures, or fixtures of the solar energy system, a clear and unobstructed buffer area at least 25 feet in width encircling the entire perimeter of the facility, with a surface and grade suitable for the safe passage of fire trucks and other emergency vehicles.

(5) (a) [6] Lands which have the highest ecological values as evidenced by large, contiguous areas of forest, undisturbed drainage areas, wetlands, or NYS DEC identified critical habitats or rare plant and animal populations shall be avoided.

(5) (a) [7] Development and operation of the system shall not have a significant adverse impact on fish, wildlife, or plant species or their critical habitats, or other significant habitats identified by the Town of Copake or other federal or state regulatory agencies.

(5) (a) [8] Previously cleared or disturbed areas are preferred locations for solar panel arrays. The clearing of additional lands to accommodate a proposed utility-scale solar energy system may be permitted, provided the percentage of newly cleared land on any parcel does not exceed 10% of the existing woodlands on that parcel.

(5) (a) [9] Arrays shall be located on a parcel in such a manner as to avoid, to the maximum extent feasible, soils classified as prime farmland by the United States Department of Agriculture, New York State or the Natural Resources Conservation Service.

(5) (a) [10] Native grasses and native vegetation shall be maintained below the arrays.

(5) (a) [11] The utility-scale solar energy system, including any associated fencing or proposed off-site infrastructure, shall be located and screened in such a way as to avoid or minimize visual impacts as viewed from:

a. Publicly dedicated roads and highways, including State Route 22 and State Route 23;
b. Existing residential dwellings located on contiguous parcels.

(5) (a) [12] A berm, landscape screen, or other opaque enclosure, or any combination thereof… capable of substantially screening the site, shall be provided.

(5) (a) [13] The design, construction, operation, and maintenance of any utility-scale solar energy system shall prevent the misdirection and/or reflection of solar

rays onto neighboring properties, public roads, and public parks in excess of that which already exists.

(5) (a) [14] All structures and devices used to support solar collectors shall be nonreflective and/or painted a subtle or earth tone color to aid in blending the facility into the existing environment.

(5) (a) [15] All transmission lines and wiring associated with a utility-scale solar energy system shall be buried and include necessary encasements in accordance with the National Electric Code and Town of Copake requirements… All transmission lines and electrical wiring shall be in compliance with the utility company's requirements for interconnection.

(5) (a) [16] Artificial lighting of utility-scale solar energy systems shall be limited to lighting required for safety and operational purposes only and shall be down-lighted and shielded from all neighboring properties and public roads.

(5) (a) [17] Any signage used to advertise the utility-scale solar energy system shall be in accordance with the Town of Copake's signage regulations. The manufacturers or installer's identification and appropriate warning signage shall be posted at the site and clearly visible.

(5) (a) [18] The height of the solar panel arrays shall not exceed 15 feet, and no part of any system structure or equipment shall exceed 15 feet in height, when oriented at maximum height.

(5) (a) [19] Following construction of a utility-scale ground-mounted solar energy system, all disturbed areas where soil has been exposed shall be reseeded with native grass and/or planted with low-level native vegetation capable of preventing soil erosion and airborne dust.

F. Abandonment or decommissioning of utility-scale solar energy systems

(2) A utility-scale solar energy system which has been inactive for a period of one year shall be decommissioned and removed at the owner's or operator's expense, and the site remediated. Upon such failure to maintain operation and activity, all approvals and permits issued in relation to such system or facility, including special

use permit and site plan approval, shall terminate. Decommissioning and remediation shall include removal of the energy system and all its components, associated structures, fixtures, equipment, fencing, and other improvements, including any subsurface wires, footings, or other elements from the parcel. Any access roads created for building or maintaining the system shall also be removed and replanted with vegetation. The site terrain shall be restored and regraded, if necessary, to a condition generally comparable to its original condition and replanted with native vegetation.

(3) All safety hazards created by the installation and operation of the utility-scale solar energy system shall be eliminated and the site remediated within six months of the removal of the utility-scale solar energy system.

(4) [Applicant must provide] a performance/removal bond or other financial surety… based upon the decommissioning cost estimate… to ensure the removal of the system, its components, and associated structures, fixtures, equipment, fencing, or other improvements, and the remediation of the site.

Town of Copake – Article 4 District Regulations, Article 5 Supplementary Regulations, and Article 9 Site Plan Review

A number of other substantive zoning regulations will be assessed in the Article 10 Application for their applicability to the Project. These regulations include the substantive provisions of the following zoning sections:

- § 232-7 Use regulations
- § 232-8 Area and dimension regulations
- § 232-9 Flood district regulations
- § 232-11 General provisions
- § 232-12 Prohibited acts
- § 232-14 Sign regulations
- § 232-15 Lighting

Consistency with Substantive Requirements

The Applicant's ability to comply with these provisions will be determined as the Project design progresses. If, at any time, the Applicant determines that it cannot comply with any of the substantive requirements identified above, the Applicant will identify 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.

Variations from Local Law Requirements

The Applicant currently plans to develop the Project in accordance with the applicable substantive local laws and ordinances. The Project layout is in the early stages of development; therefore, it is difficult at this time to determine with certainty whether any requests will be made to the Board to not apply substantive local law provisions because they will be unreasonably burdensome. Nevertheless, the Applicant attempted to identify such potential provisions for this PSS. The Applicant may need a waiver from the following provision:

- Zoning Code Section 232-16.12(E)(4)(a)(2): Lot Restrictions
    - The lot restrictions provided in this provision may be too restrictive for efficient Project design based on potential environmental and engineering constraints.

As the Project layout develops, the Applicant's ability to comply with these provisions will become clearer. The Applicant will provide a complete list of its waiver requests in the Application along with the required justifications. The Applicant reserves all rights to request waivers from other provisions if necessary in the Application.

C. Zoning Designation

The Town of Copake has adopted zoning regulations (last amended July 2018). The following provides a summary of the substantive provisions of zoning regulations applicable to the Project.

Town of Copake – *Chapter 232- Zoning*
The Project Area is wholly located within the Agriculture and Rural Residential (RU) and Hamlet Business (HB) Zoning Districts. Principal permitted uses within the Agriculture and Rural Residential District include the following:

- Residential: One-family dwelling, two-family dwelling.

- General: Accessory uses incident to any permitted use on the same lot, agriculture for home use, minor home occupation, public utility lines (except high-tension transmission), small-scale solar energy system, unclassified solar energy system.
- Business: Agricultural use, farm stand, farm stay, outdoor storage.
- Industrial: None

Principal permitted uses within the Hamlet Business District include the following:

- Residential: One-family dwelling, residential apartment in commercial building, senior citizen housing, two-family dwelling.
- General: Agriculture for home use, bed-and-breakfast, minor home occupation, public utility lines (except high-tension transmission), small-scale solar energy system, unclassified solar energy system.
- Business: Agricultural use, agricultural-related business including brewery/distillery and winery, agritourism including brewery/distillery/winery, bus shelter/stop, commercial greenhouse, farm stand, professional office, retail store, and vehicle charging station.
- Industrial: None

Utility-scale solar energy systems are permitted in both pertinent zoning districts through the issuance of a special use permit and site plan review.

Proposed Exhibit 31 Contents

During preparation of the Application, the Applicant will consult with the Town of Copake and Columbia County, as applicable, regarding the local law requirements applicable to the construction, operation, and maintenance of the Project, and to determine whether any potential request by the Applicant that the Board elect to not apply any such local requirements could be obviated by design changes to the Project, or otherwise.

The Applicant proposes to collect, evaluate, and provide the following information to support and prepare Exhibit 31 of the Application in accordance with 16 NYCRR § 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 the town within the Project Area. Copies of the full text of local laws and ordinances, and attachments, such as an official Zoning Districts

Map, Use and Area Tables, definitions of terminology in regulations, and related attachments will be provided to NYSDPS Staff. These local procedural requirements are supplanted by PSL Article 10 unless the Siting 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 Siting 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 Copake 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 Siting Board expressly authorize the exercise of the electric, plumbing and building permit application, inspection and certification processes by the Town of Copake.

(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 Siting 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 Siting 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 Siting Board elects 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.

(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 Siting 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 Siting Board elect to not apply them by finding that, as applied to the 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 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 Project and a statement of the language in the zoning ordinance or local law by which it is indicated that the Project is a permitted use at the proposed site. If the language of the zoning ordinance or local law indicates that the 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.

The Application will address the Town of Copake zoning law, including applicable solar energy facilities code provisions in effect at the time the Application is filed. Pertinent laws, codes and regulations will be included in the Application as an appendix. SEQRA documentation of local code revisions adoption actions will be included in the Application as an appendix to the extent it is finalized and publicly accessible.

3.32 State Laws and Regulations (Exhibit 32)

Table 3-2 includes a list of State required permits, authorizations, and associated review by each regulatory agency, requirements, preliminary studies and Application requirements, and status of each and estimated agency review time.

Table 3-2. State Reviews, Permits, and Approvals

Permit/ Clearance	Regulatory Agency[1]	When Required	Potential Studies & Application Requirements	Status and Estimated Approval Times
Article 10 Siting Certificate	Siting Board	Construction and operation of major electric generating facilities pursuant to Article 10 of the PSL	Article 10 Application to be prepared in accordance with 16 NYCRR Chapter X (Certification of Major Electric Generating Facilities)	Final PIP Plan filed in April 2020.
Stormwater Permit (SPDES GP-0-20-001)	NYSDEC	Soil disturbance of one or more acres	Preparation of a SWPPP	Authorization under this General Permit (or that in effect at the time of construction) is coordinated as part of the Article 10 process.
Water Quality Certification (Section 401 of Clean Water Act)	Siting Board	Projects that will result in a discharge of dredged or fill material into Waters of the US	Analyses for this Application are ongoing	Issuance will be coordinated as part of the Article 10 process.
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 IA/IB Archaeological Survey and a Historic Architectural Resources Survey may be required.	Project Area has been preliminarily reviewed on SHPO CRIS.

Permit/ Clearance	Regulatory Agency[1]	When Required	Potential Studies & Application Requirements	Status and Estimated Approval Times
Agricultural and Markets Law – Article 25-AA	NYSDAM	Consultation required as Project Area is located within certified Agricultural Districts	Review of Agricultural District Mapping & Coordination with NYSDAM	Consult with NYSDAM for recommendation on how to minimize impacts to agricultural operations as part of the Project. Consultation will be incorporated into the Article 10 process.
Interconnection Studies	NYISO	Interconnection Required	Feasibility study underway	Interconnection request submitted 02/03/2017

Compliance with State Requirements

The Applicant intends to fully comply with the applicable, substantive State laws and regulations required for construction and operation of the Project as described herein.

State Approvals Applicant Requests Be Left with State Agencies

At this time, the Applicant does not anticipate that it will request that any permits be left with state agencies and not be issued by the Siting Board.

Proposed Exhibit 32 Contents

Exhibit 32 of the Siting Board's regulation provides 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 proposed 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 Project (including use and occupancy rights, and interconnection electric 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 § 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, if necessary based on the size of the Project, to the Public Service Commission for a Certificate of Public Convenience and Necessity Pursuant to § 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 Siting 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 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 Project as proposed conforms to all such state substantive requirements. Pursuant to PSL § 168(3) (e), the Siting Board must find that the Project 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 off-site 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 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, 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.

USFWS:

- Endangered Species Act, Section 7 consultation.

USACE:

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

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

Proposed Exhibit 33 Contents

The Applicant proposes to collection, evaluate, and provide the following information to support and prepare Exhibit 33 of the Application in accordance with 16 NYCRR § 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 of 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)

The Project will interconnect to the electric transmission system at the POI at the existing Craryville Substation owned by NYSEG. Electricity is produced by the proposed solar panels, generating power at low voltage DC which will be converted to AC at the inverters. An underground cable system, and potentially overhead collection lines, will be utilized to collect power at medium voltage AC that will be transmitted to the proposed, on-site collection substation. The collection substation will step-up the medium voltage power to 115 kV and deliver the power to the proposed POI and existing Craryville 115 kV substation. The Applicant has requested interconnection of the Project to the New York electric transmission system connecting to NYSEG's Craryville-Klinekill and Churchtown-Craryville 115 kV transmission lines.

Under queue request Q644, the NYISO is currently studying the interconnection of 60 MW to the existing NYSEG transmission infrastructure. The POI connects the Project to the existing NYSEG Craryville 115 kV substation. 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, land acquisition, access road layout, final collection substation siting and field surveys to minimize impacts to resources such as wetlands, forested areas, and agricultural lands. In addition to the electric cables, the collection system will include fiber optic cables that will connect the Project's SCADA system for O&M communications. The conceptual design of the 115 kV cable collection system will be provided in the Application.

Proposed Exhibit 34 Contents

The Applicant proposes to collect, evaluate, and provide the following information to support and prepare Exhibit 34 of the Application in accordance with 16 NYCRR § 1001.34:

Exhibit 34 shall contain a detailed description of the proposed electric interconnection, including:

(a) The design voltage and voltage of initial operation.

(b) The type, size, number, and materials of conductors.

(c) The insulator design.

(d) The length of the transmission line.

(e) The typical dimensions and construction materials of the towers as applicable.

(f) The design standards for each type of tower and tower foundation as applicable.

(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 115 kV switching station, including an explanation of the necessity of these components.

(j) Any terminal facility.

(k) The need for cathodic protection measures.

(l) A description of installation methods proposed or used for collection lines. For the routing of collection system cables between the various solar arrays within the Project Area and to the Project collection substation, a conceptual design of the cable collection system will be provided along with a discussion of installation methods. Electric collection lines will be primarily underground. Any type of overhead collection considered for the Project will be discussed and assessed in the Application. In the event there are any overhead collection or transmission pole structures in agriculture fields, the NYSDAM will require that they be self-supporting, with no guy wires being located in agricultural land.

(m) In the event that overhead collection or transmission pole structures are proposed, associated impacts will be incorporated in the VIA.

3.35 Electric and Magnetic Fields (Exhibit 35)

The proposed solar Project components, such as the electric collection lines and transformers, will generate minimal EMF during operation. 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. Electrical collection cables, transformers, and other electrical equipment electrical collection cables will be limited to a restricted area to provide separation from access by the general public. As such, limited, or non-existent, EMF exposure from Project components is anticipated.

EMF Study

The Applicant will utilize EMF standards issued by the New York State PSC to guide the EMF study to be included with the Application and apply measurement methods for compliance.

As noted previously, the proposed electric collection lines will be located at a distance sufficient from existing structures, therefore EMF levels produced as a result of the Project will be well below the PSC guidelines.

Proposed Exhibit 35 Contents

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

(a) The collection substation is planned to be located adjacent to the Craryville Substation and the connecting ROW is anticipated to be approximately 100 feet in length and within the Project Area. EMF levels produced from the interconnection facilities will be evaluated.

(b) For each, if any, identified on-site transmission ROW segment, provide both "base case" and "proposed" cross-sections to scale showing:

(1) All proposed 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 proposed underground electric transmission, sub-transmission and distribution facilities.

(3) All underground gas transmission facilities.

(4) All ROW boundaries.

(5) Structural details and dimensions for all proposed structures (dimensions, phase spacing, phasing, and similar categories) and include a Station number identifying the location.

(c) A set of the aerial photographs/drawings enhanced by showing the exact location of each:

(1) On-site 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, with calculation tables and field strength graphs for each identified ROW segment cross-section, as follows:

(1) Signed and stamped or 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 approximately one meter above ground level with 5-foot measurement intervals depicting the width of

the entire ROW and out to 500 feet from the edge of the ROW 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 ROW and out to 500 feet from the edge of the ROW 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 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 ROW and out to 500 feet from the edge of the ROW 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 ROW (without construction or operation of the 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 ROW and out to 500 feet from the edge of the ROW on both sides, including digital copies of all input assumptions and outputs for the calculations.

(7) Regarding magnetic fields, modeling will be conducted for the portion of underground collection circuit where maximum current flow will result from co-located collection lines during peak load conditions.

(8) The Applicant will provide an EMF study for the overhead electric collection circuit, if applicable, identifying 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.

(e) The Application will provide a study evaluating potential induced voltages on Project components (perimeter fencing, solar array structures, etc.) located in proximity to the Project-proposed high-voltage electrical transmission facilities.

3.36 Gas Interconnection (Exhibit 36)

This requirement is not applicable to the Project, as there are no gas interconnections included in the Project.

3.37 Back-up Fuel (Exhibit 37)

This requirement is not applicable to the Project, as there is no back-up fuel required for the Project.

3.38 Water Interconnection (Exhibit 38)

This requirement is not applicable to the Project, as there are no public water supply interconnections required for the operation of the Project.

3.39 Wastewater Interconnection (Exhibit 39)

This requirement is not applicable to the Project, as there are no municipal wastewater interconnections required for the operation of the 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.

The Applicant anticipates that NYSEG will use a fiber system to communicate with and monitor the proposed collection substation. As part of developing the Application, the Applicant will consult with NYSEG on its communication requirements. The results and data collected as a result of this coordination with NYSEG will also be included in Exhibit 40 of the Application.

Proposed Exhibit 40 Contents

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 Project imposed by the provider, and a description of how the interconnection and any necessary system upgrades will be installed, owned, maintained, and funded.

(d) A description of probable environmental effects of the telecommunication interconnection to the extent information is available.

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

The Applicant plans to submit an Application to construct a major electric generating facility, the Project, under Article 10 of the PSL. As required, the Applicant has prepared this 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 to be 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 the Meeting Log for this Project, which is being submitted as an appendix to this PSS. Input obtained from this stakeholder outreach has helped to inform this PSS. The Applicant will continue to consult with the public, affected agencies, and other stakeholders throughout the permitting process, and will use information gathered during these efforts to refine and improve the Project.

The Project Area addressed in this PSS consists of preliminary locations being evaluated for placement of Project components. As shown in Figure 2, the Project Area consists of approximately 900 acres of land within the outline of the area that continues to be studied in the Town of Copake, Columbia County, New York. The Project will have a generating capacity of 60-MW of power located on land with whom the Applicant has entered (or will enter into) a lease or easement agreement with private property owners. Within the Project Area, it is anticipated that the proposed solar energy center would comprise an area of approximately 400 to 500 acres of land. The Applicant intends to construct, own, operate, and maintain the Project components.

Project components will include commercial-scale solar arrays, access roads, inverters, buried (and possibly overhead) electric collection lines, collection substation, generation tie line and the existing POI substation, fencing, laydown areas, and a potential energy storage system (if included in the final Project design). The Project's interconnection will include the proposed collection substation and existing Craryville 115 kV substation, which is owned and operated by NYSEG. Two 115 kV transmission lines extend out of this Craryville substation: Craryville-Klinekill and Churchtown-Craryville. The existing Craryville substation is located along Main Street. Existing aboveground transmission lines traverse the area in proximity to the Project Area from this substation in a north-south and east-west orientation, respectively.

The Project will have significant positive socioeconomic impacts in the Project Area, in Columbia County and beyond, through both temporary construction and permanent operating and

maintenance employment opportunities. In addition, payments to the municipalities will be made through development of a PILOT agreement with the Columbia County IDA and/or Host Community Agreement. Shepherd's Run Solar will continue to coordinate with the IDA and municipal officials and provide an update on the status of these agreements as part of the Application.

By adding up to 60-MW of clean, renewable, solar power into the New York State energy market, the Project is consistent with the SEP, as amended in 2020, and will contribute to the NY 2030 target of 70 percent of the energy consumed in NYS being generated by renewable resources and 100 percent in 2040. The Project will also improve fuel diversity within New York State by increasing the amount of electricity produced by solar generation facilities.

Solar technology generates clean electricity without emitting pollutants and will have a positive effect on air quality and reduction of greenhouse gases. While very minor levels of air emissions will be produced during construction, solar PV technology will generate electricity without creating any gaseous, liquid, or solid wastes. The Applicant has endeavored to provide as much information relative to the Project as is reasonably available per PSL 1000.5 (I). Table 5 below provides an overview of the PSL 1000.5 (I) requirements and the corresponding section within the PSS where the information has been addressed.

Table 3-3. Content of Project PSS

PSL 1000.5(l) Section	Article 10 PSS Requirement	Corresponding Section of the Project PSS	Notes
PSL 1000.5 (l)(1)	As much information as is reasonably available concerning the proposed Facility, generally in the form (though in less detail) that it will appear in the Application;	Section 2.0	Sections 2.1 through 2.5 contain reasonably available information related to existing conditions, potential impacts and minimization/mitigation.
PSL 1000.5 (l)(2)	A preliminary scope of an environmental impact analysis containing a brief discussion, based on 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(l) Section	Article 10 PSS Requirement	Corresponding Section of the Project PSS	Notes
PSL 1000.5 (l)(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 (l)(2)(ii)	Potentially significant adverse environmental and health impacts resulting from the construction and operation of the proposed Facility including also an identification of particular aspects of the environmental setting that may be affected, including any material impacts or effects identified in consultations by the public, affected agencies, and other stakeholders, and a responsive analysis by the Applicant as to those issues identified in consultations;	Section 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 consultations.

PSL 1000.5(l) Section	Article 10 PSS Requirement	Corresponding Section of the Project PSS	Notes
PSL 1000.5 (l)(2)(iii)	The extent and quality of information needed for the Application to adequately address and evaluate each potentially significant adverse environmental and health impact, including existing and new information where required, and the methodologies and procedures for obtaining the new information;	Section 3.0	Each sub-section of Section 3.0 presents the extent and quality of information anticipated for presentation in the corresponding Exhibit of the Article 10 Application.
PSL 1000.5 (l)(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(l) Section	Article 10 PSS Requirement	Corresponding Section of the Project PSS	Notes
PSL 1000.5 (l)(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 (l)(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 (l)(2)(vii)	Where it is proposed to use petroleum or other back-up fuel for generating electricity, a discussion and/or study of the sufficiency of the proposed on-site fuel storage capacity and supply;	Currently not applicable to this Project	

PSL 1000.5(l) Section	Article 10 PSS Requirement	Corresponding Section of the Project PSS	Notes
PSL 1000.5 (l)(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 (l)(2)(ix)	If the proposed Facility affects any land or water use or natural resource of the coastal area and Federal authorization or funding is necessary, a preliminary analysis of the consistency of the proposed Facility with the enforceable policies of the New York State coastal management program or, where the action is in an approved local waterfront revitalization program area, with the local program;	Not applicable to this Project	The Project location is not subject to Coastal Zone Consistency analysis.

PSL 1000.5(l) Section	Article 10 PSS Requirement	Corresponding Section of the Project PSS	Notes
PSL 1000.5 (l)(2)(x)	A statement of the reasons why the primary proposed location and source, taking into account the potentially significant and adverse environmental impacts, is best suited, among the alternatives, including a "no action" alternative, to promote public health and welfare, including the recreational and other concurrent uses that the site may serve, except that a private facility applicant may limit its description and evaluation of alternative locations to parcels owned by, or under option to, such private facility applicant or its affiliates and its description and evaluation of alternative sources to those that are reasonable alternatives to the proposed Facility that are feasible considering the objectives and capabilities of the sponsor;	Section 3.09	See Section 3.09.

PSL 1000.5(l) Section	Article 10 PSS Requirement	Corresponding Section of the Project PSS	Notes
PSL 1000.5 (l)(2)(xi)	A preliminary identification of the demographic, economic and physical attributes of the community in which the Facility is proposed to be located and in which any alternative location identified is located, and a preliminary environmental justice evaluation of significant and adverse disproportionate environmental impacts of the proposed Facility and any alternative facility identified that would result from construction and operation considering, among other things, the cumulative impact of existing sources of emissions of air pollutants and the projected emission of air pollutants from the proposed or alternative facility in a manner that is in accordance with any requirements for the contents of an Article 10 PSS 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 3.0.

PSL 1000.5(l) Section	Article 10 PSS Requirement	Corresponding Section of the Project PSS	Notes
PSL 1000.5 (l)(2)(xii)	An identification of any other material issues raised by the public and affected agencies during any consultation and the response of the Applicant to those issues.	Appendix 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 consultation activities conducted by the Applicant since filing the PIP Plan.
PSL 1000.5 (l)(3)	An identification of all other State and Federal permits, certifications, or other authorizations needed for construction, operation or maintenance of the proposed Facility;	Sections 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 (l)(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(l) Section	Article 10 PSS Requirement	Corresponding Section of the Project PSS	Notes
PSL 1000.5(l)(5)	A list and description of all local laws, and regulations issued thereunder, applicable to the construction, operation, or maintenance of the proposed Facility and a statement either providing a preliminary assessment of an ability to comply or indicating specific provisions that the Applicant will be requesting the Board to elect not to apply, in whole or in part, and a preliminary explanation as to why the Board should elect not to apply the specific provisions as unreasonably burdensome in view of the existing technology or the needs of or costs to ratepayers whether located inside or outside of such municipality;	Section 3.31	Section 3.31 addresses local laws and ordinances.
PSL 1000.5 (l)(6)	A description of the Applicant, its formation, status, structure, holdings, affiliate relationships, powers (including whether it has or will seek to obtain the power of eminent domain, either directly or indirectly), franchises and consents;	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(l) Section	Article 10 PSS Requirement	Corresponding Section of the Project PSS	Notes
PSL 1000.5 (l)(7)	A description of the Applicant's property rights and interests or those it proposes to acquire to all lands of the proposed Facility and any private or public lands or private or public streets, highways or rights-of-way crossed by any interconnections necessary to serve the Facility such as, but not limited to, electric lines, gas lines, water supply lines, waste water or other sewage treatment facilities, communications and relay facilities, access 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 (l)(8)	Any other information that the Applicant may deem to be relevant.	Throughout the PSS	The document contains additional information beyond the base requirements of PSL 1000.5. Any other information deemed relevant by the Applicant has been included in the PSS.

5.0 REFERENCES

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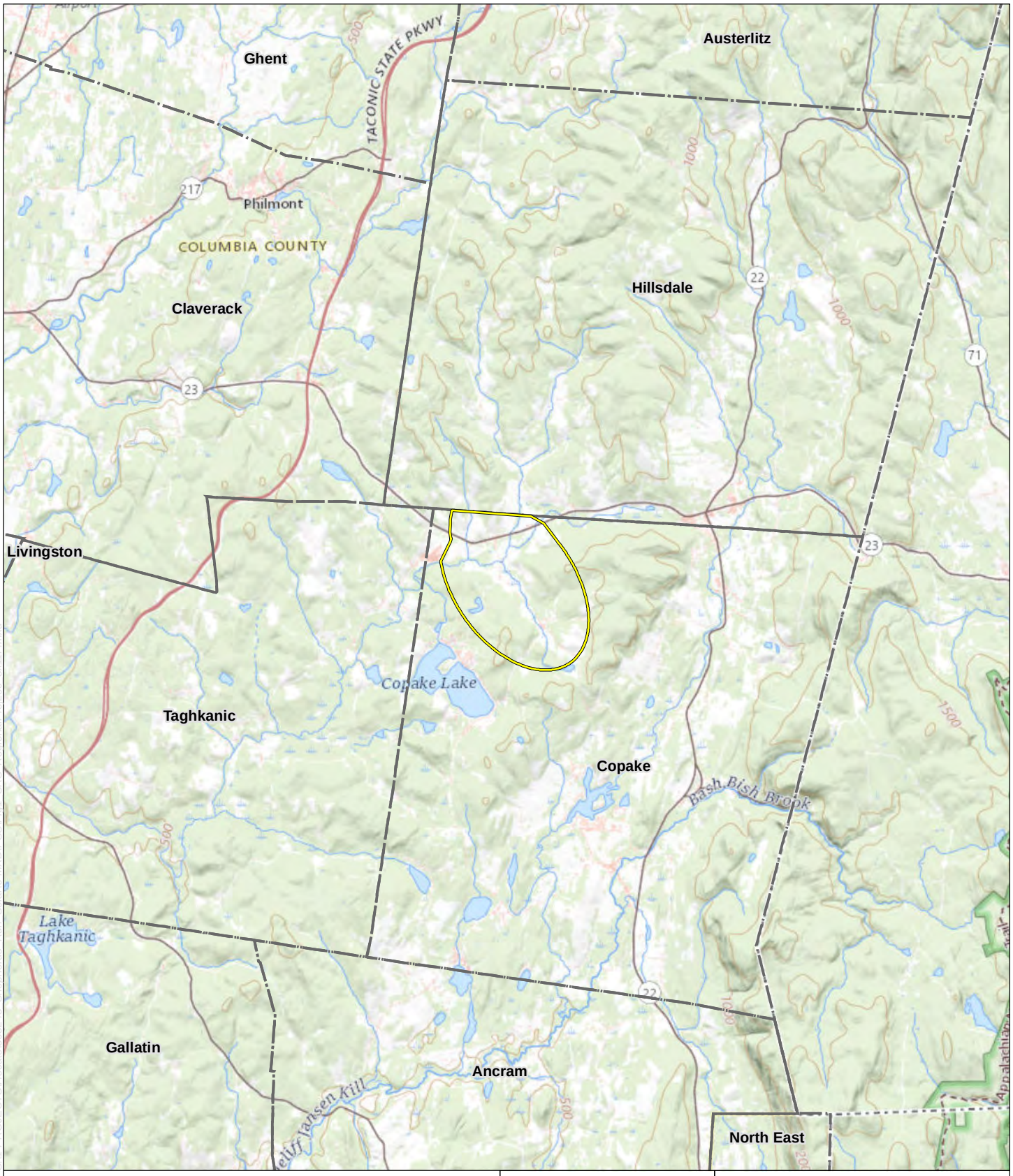
FIGURES



Project Area

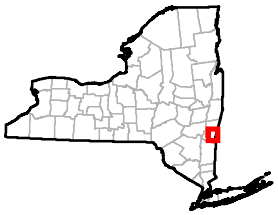
City/Town Boundary

N

0 1 2 Miles

Base Map: USGS National Map, 2018

MAP LOCATION



Hecate Energy

REGIONAL PROJECT LOCATION

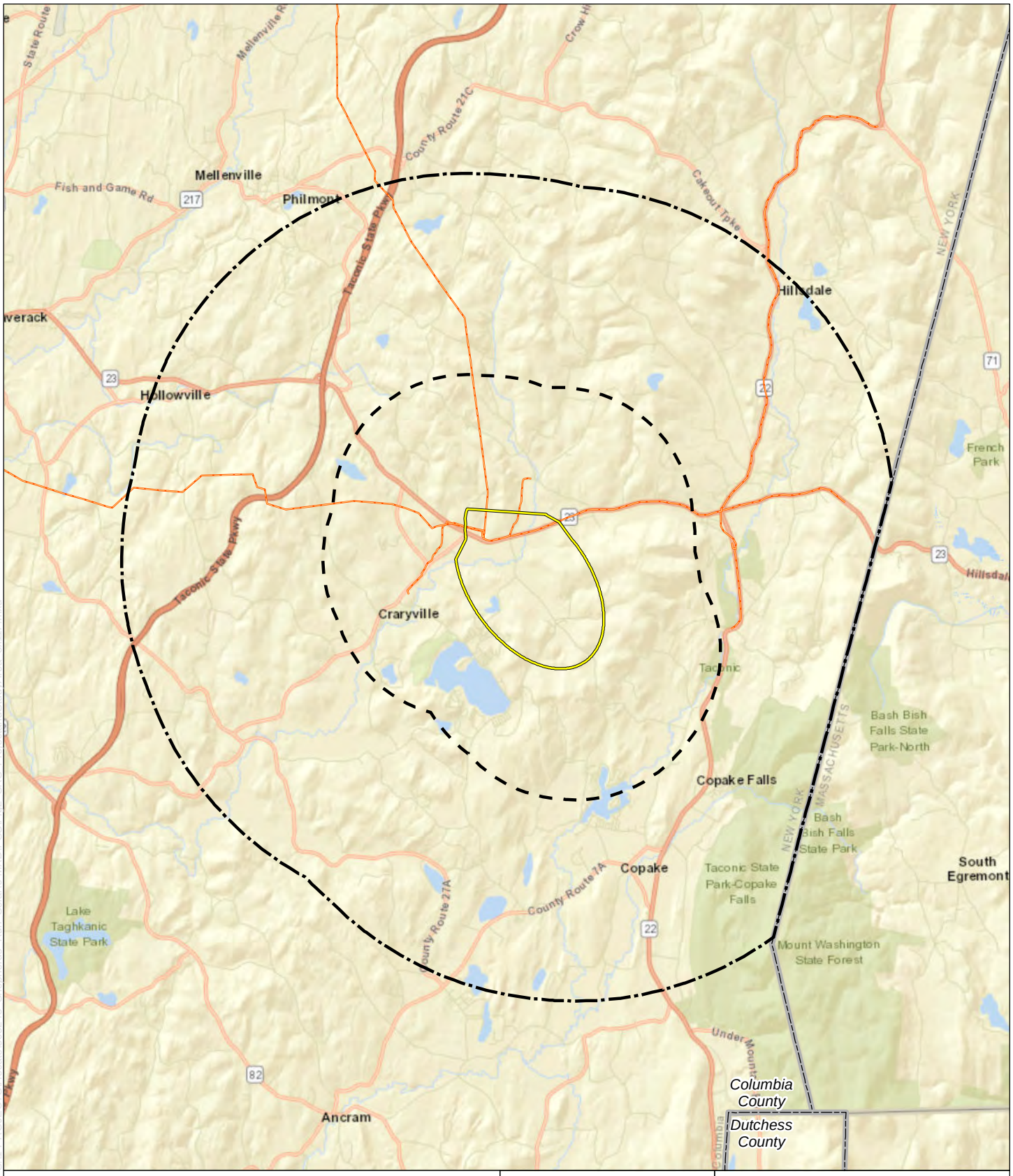
SHEPHERD'S RUN SOLAR

TOWN OF COPAKE, COLUMBIA COUNTY, NY

FIGURE 1	JULY 2020

Map Produced by TRC

S:\1-PROJECTS\Hecate\365245 Shepherds Run Solar\6-MXD\PSS\Fig1 SRS_RegionalProjLoc 8x11P.mxd



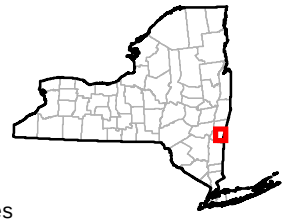
Project Area
2-Mile Study Area
5-Mile Visual Study Area
Existing Transmission
County Boundary

N

0 1 2 Miles

Data: NYS GIS Program Office
Base Map: ESRI 'World Street Map' Basemap, 2020.

MAP LOCATION



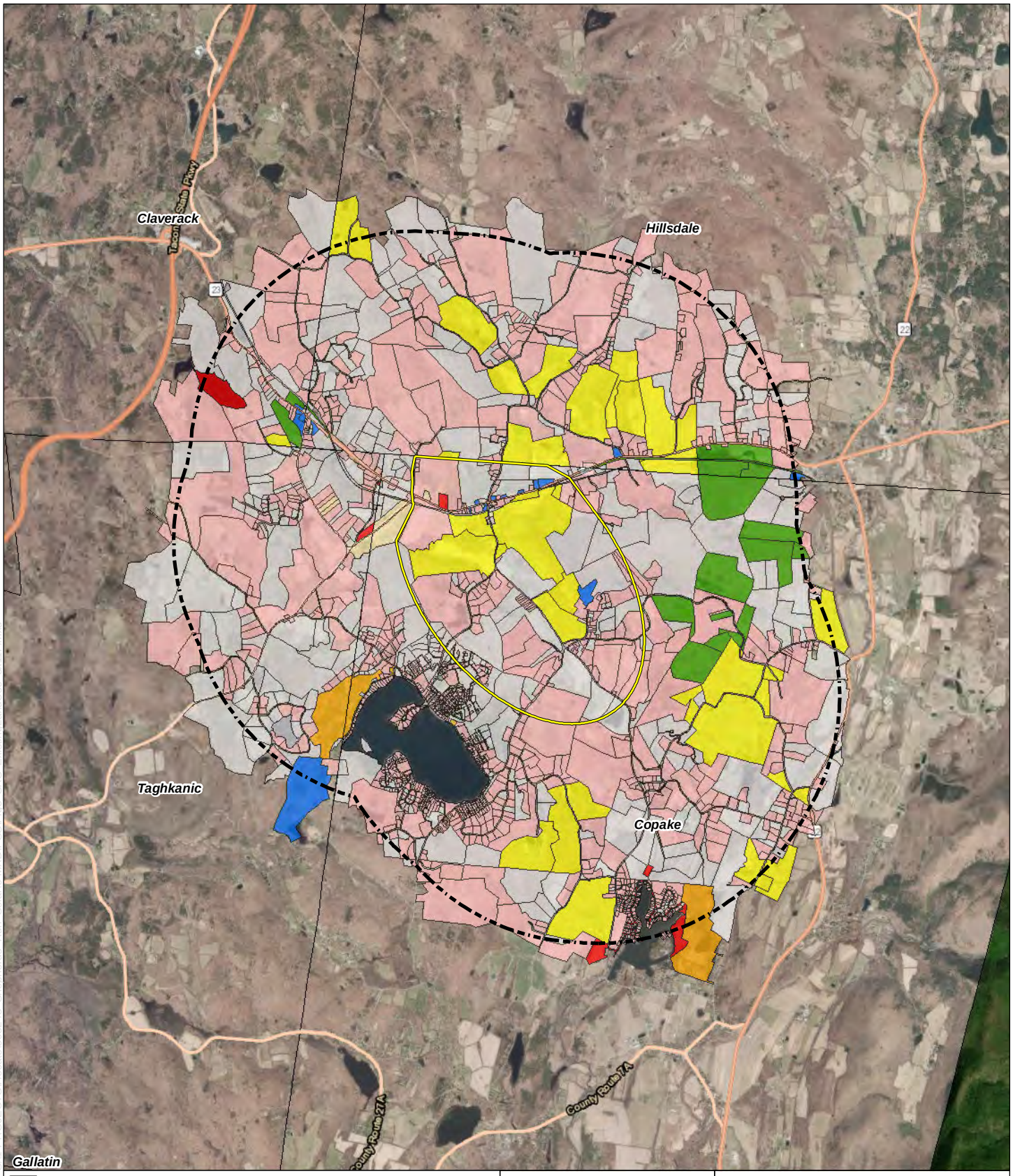
Hecate Energy

PROJECT AND STUDY AREA
SHEPHERD'S RUN SOLAR
TOWN OF COPAKE, COLUMBIA COUNTY, NY

FIGURE 2	JULY 2020

Map Produced by TRC

S:\1-PROJECTS\Hecate\365245_Shepherds_Run_Solar\6-MXD\PSS\Fig2_SRS_ProjectandStudyArea_8x11P.mxd



S:\1-PROJECTS\Hecate\365245_Shepherds_Run_Solar\6-MXD\PSS\Fig3_SRS_ExistingLandUse_8x11P.mxd

PROJECT AREA
2-MILE STUDY AREA
TOWN BOUNDARY

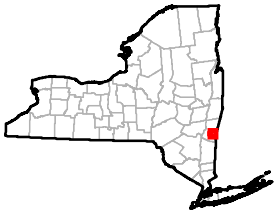
AGRICULTURAL
RESIDENTIAL
VACANT LAND
COMMERCIAL
RECREATION & ENTERTAINMENT
COMMUNITY SERVICES
PUBLIC SERVICES
WILD, FORESTED, CONSERVATION LANDS

N

0 0.5 1 Miles

Data: Columbia County Planning Department, 2020.
Base Map: ESRI Basemap 'World Imagery' 2017.

MAP LOCATION

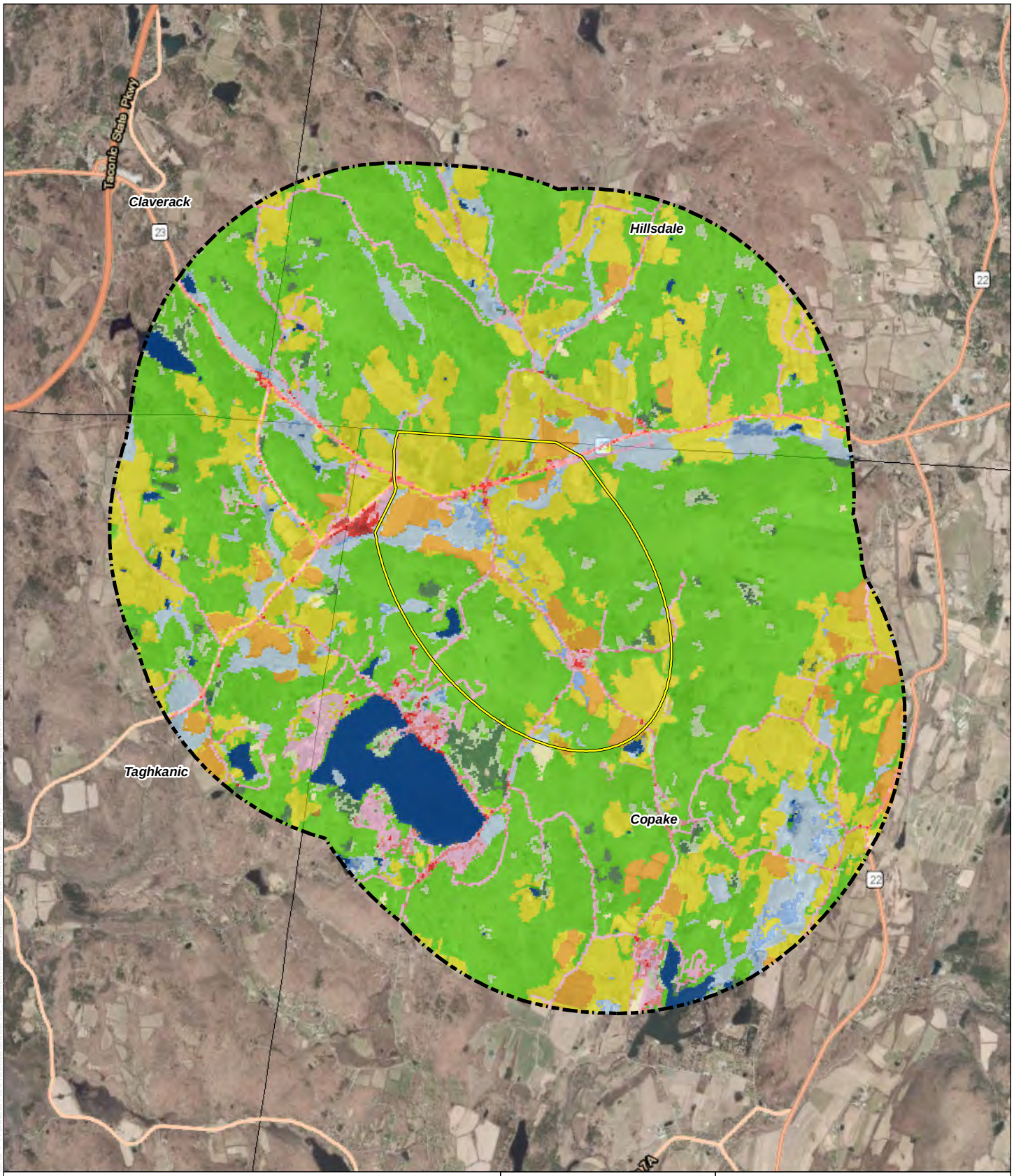


Hecate Energy

EXISTING LAND USE
SHEPHERD'S RUN SOLAR
TOWN OF COPAKE, COLUMBIA COUNTY, NY

FIGURE 3	JULY 2020

Map Produced by TRC



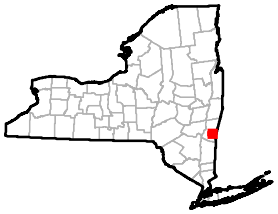
PROJECT AREA
2-MILE STUDY AREA
TOWN BOUNDARY
OPEN WATER
DEVELOPED LAND - OPEN SPACE
DEVELOPED LAND - LOW INTENSITY
DEVELOPED LAND - MEDIUM INTENSITY
DEVELOPED LAND - HIGH INTENSITY
BARE ROCK/SAND/CLAY
DECIDOUS FOREST
EVERGREEN FOREST
MIXED FOREST
SHRUB/SCRUB
GRASSLAND
PASTURE/HAY
CULTIVATED CROPS
WOODY WETLANDS
EMERGENT WETLANDS

N

0 0.5 1 Miles

Data: National Land Cover Database, USGS 2016.
Base Map: ESRI Basemap 'World Imagery' NYS 2017.

MAP LOCATION



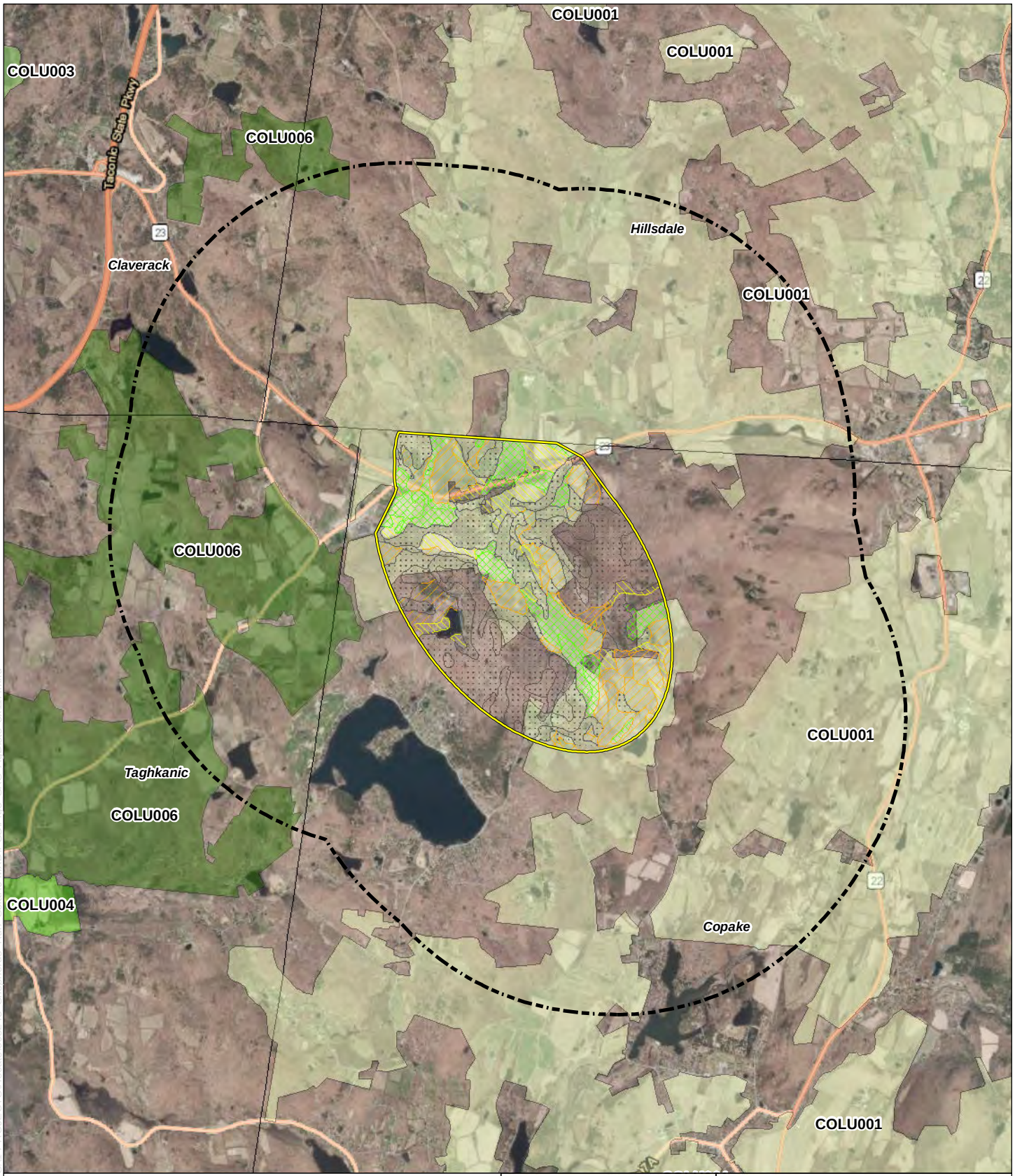
Hecate Energy

EXISTING VEGETATED COVER IN THE STUDY AREA

SHEPHERD'S RUN SOLAR
TOWN OF COPAKE, COLUMBIA COUNTY, NY

FIGURE 4	JULY 2020

Map Produced by TRC



Hecate Energy

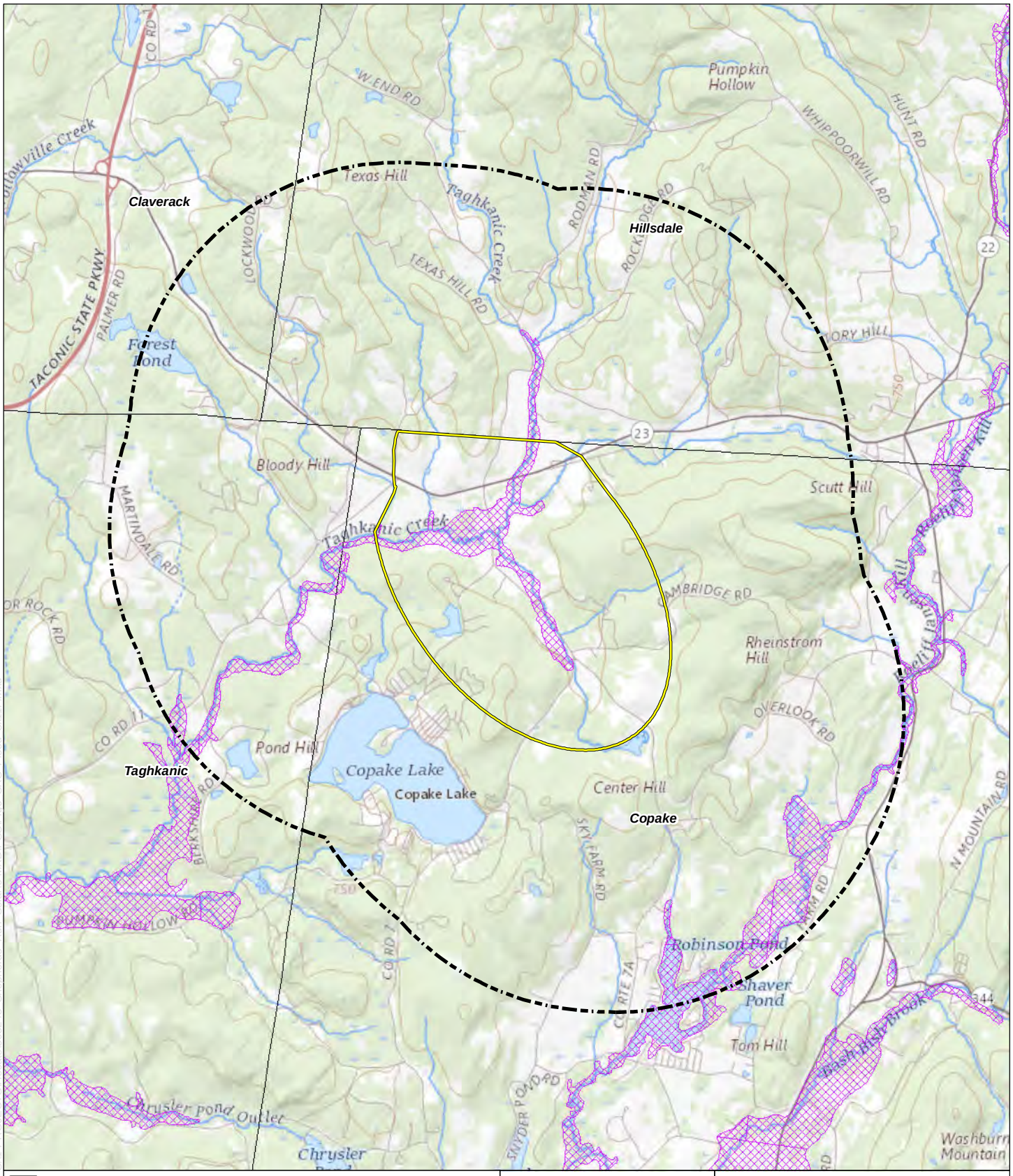
AGRICULTURAL DISTRICTS IN THE PROJECT AREA

SHEPHERD'S RUN SOLAR

TOWN OF COPAKE, COLUMBIA COUNTY, NY

FIGURE 5	JULY 2020

Map Produced by TRC



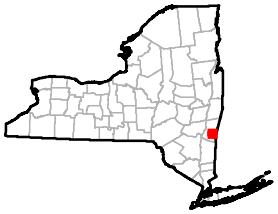
PROJECT AREA
2-MILE STUDY AREA
TOWN BOUNDARY
100 YEAR FLOODPLAIN (FEMA)

N

0 0.5 1 Miles

Data: NYGIS/FEMA 2019, Columbia County Planning Department 2020.
Base Map: ESRI USGS Topographic Basemap 'National Map', 2018.

MAP LOCATION



Hecate Energy

FEMA FLOOD ZONES IN THE PROJECT AREA

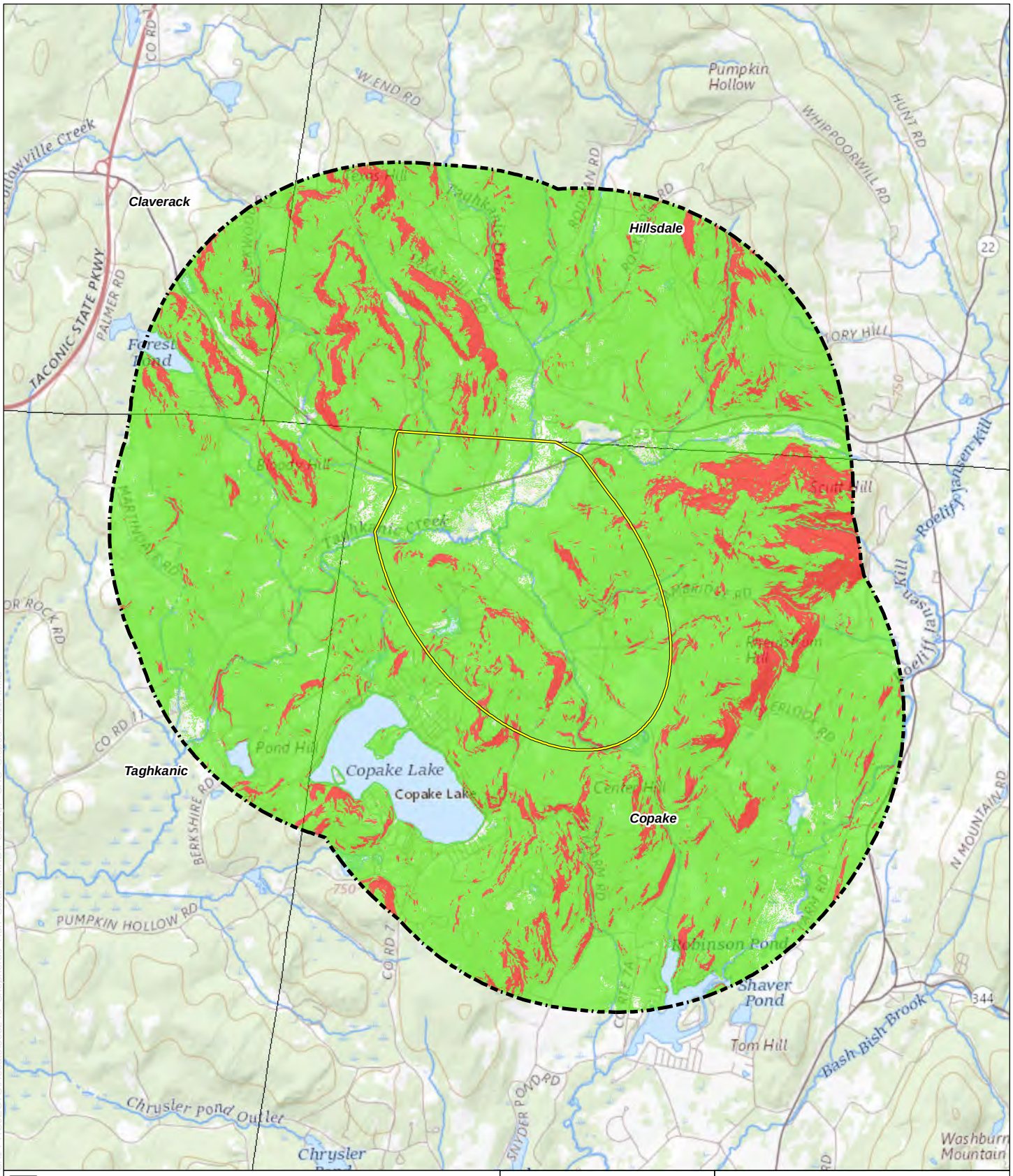
SHEPHERD'S RUN SOLAR

TOWN OF COPAKE, COLUMBIA COUNTY, NY

FIGURE 6	JULY 2020

Map Produced by TRC

S:\1-PROJECTS\Hecate\365245 Shepherds Run Solar\6-MXD\PSS\Fig6 SRS Flood 8x11P.mxd



PROJECT AREA
2-MILE STUDY AREA
SLOPE DEGREES (1-15)
SLOPE DEGREES (15+)
TOWN BOUNDARY

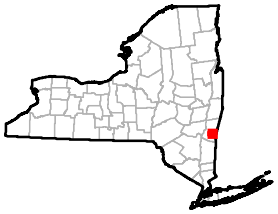
N

1 inch = 5,280 feet

0 0.5 1 Miles

Data: USGS, ESRI Terrain.
Base Map: ESRI USGS Topographic Basemap 'National Map', 2018.

MAP LOCATION



Hecate Energy

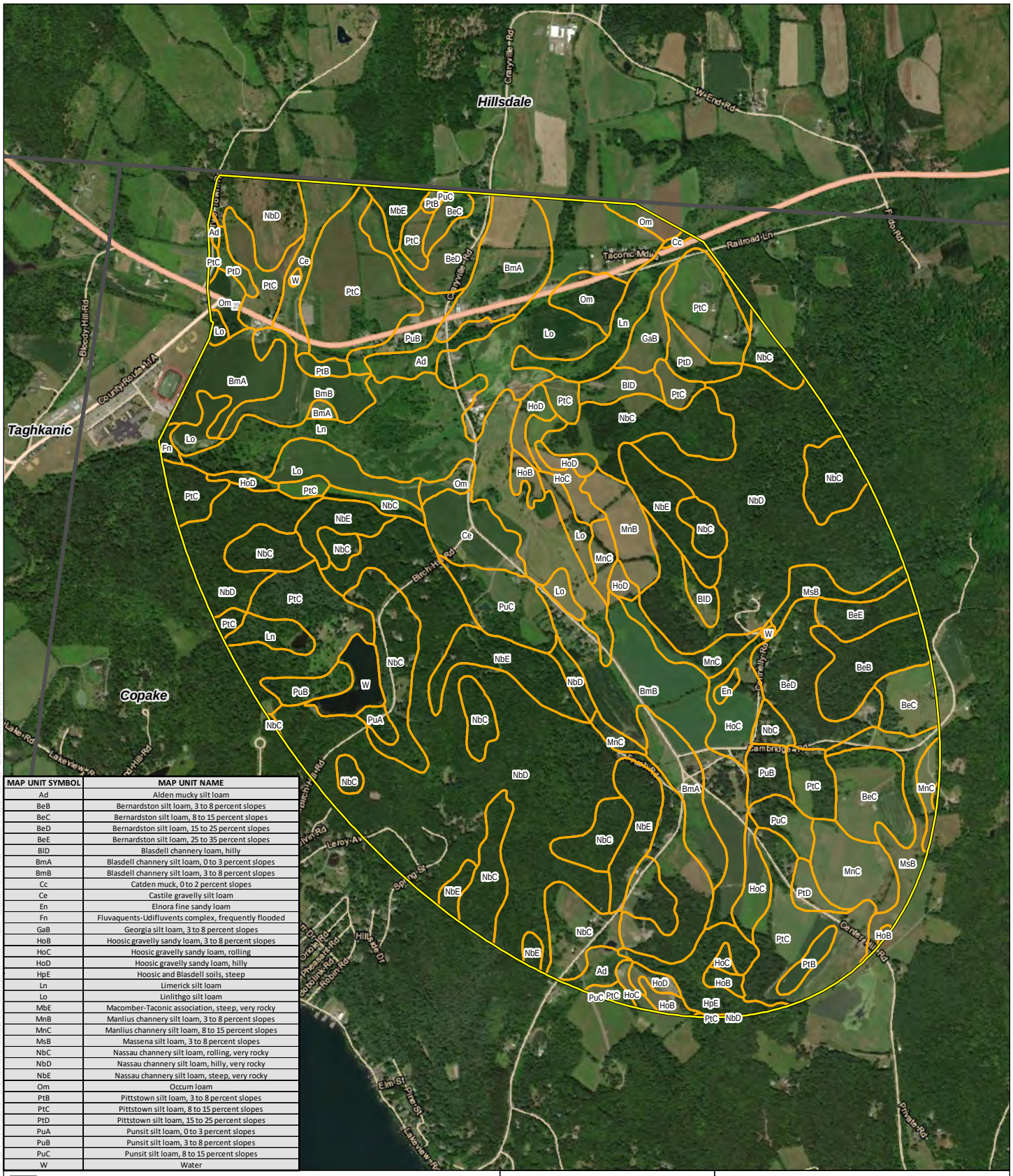
SLOPES IN THE STUDY AREA

SHEPHERD'S RUN SOLAR
TOWN OF COPAKE, COLUMBIA COUNTY, NY

FIGURE 7	JULY 2020

Map Produced by TRC

S:\1-PROJECTS\Hecate\365245_Shepherds_Run_Solar\6-MXD\PSS\Fig7_SRS_Slopes_8x11P.mxd



MAP UNIT SYMBOL	MAP UNIT NAME
Ad	Alden mucky silt loam
BeB	Bernardston silt loam, 3 to 8 percent slopes
BeC	Bernardston silt loam, 8 to 15 percent slopes
BeD	Bernardston silt loam, 15 to 25 percent slopes
BeE	Bernardston silt loam, 25 to 35 percent slopes
BID	Blasdell channery loam, hilly
BmA	Blasdell channery silt loam, 0 to 3 percent slopes
BmB	Blasdell channery silt loam, 3 to 8 percent slopes
Cc	Catden muck, 0 to 2 percent slopes
Ce	Castile gravelly silt loam
En	Elnora fine sandy loam
Fn	Fluvaquents-Udifluvents complex, frequently flooded
GaB	Georgia silt loam, 3 to 8 percent slopes
HoB	Hoosic gravelly sandy loam, 3 to 8 percent slopes
HoC	Hoosic gravelly sandy loam, rolling
HoD	Hoosic gravelly sandy loam, hilly
HpE	Hoosic and Blasdell soils, steep
Ln	Limerick silt loam
Lo	Linlithgo silt loam
MbE	Macomber-Taconic association, steep, very rocky
MnB	Manlius channery silt loam, 3 to 8 percent slopes
MnC	Manlius channery silt loam, 8 to 15 percent slopes
MsB	Massena silt loam, 3 to 8 percent slopes
NbC	Nassau channery silt loam, rolling, very rocky
NbD	Nassau channery silt loam, hilly, very rocky
NbE	Nassau channery silt loam, steep, very rocky
Om	Occum loam
PtB	Pittstown silt loam, 3 to 8 percent slopes
PtC	Pittstown silt loam, 8 to 15 percent slopes
PtD	Pittstown silt loam, 15 to 25 percent slopes
PuA	Punsit silt loam, 0 to 3 percent slopes
PuB	Punsit silt loam, 3 to 8 percent slopes
PuC	Punsit silt loam, 8 to 15 percent slopes
W	Water

PROJECT AREA
NRCS SOILS
TOWN BOUNDARY

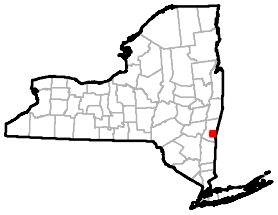
N

1 inch = 2,000 feet

0 1,000 2,000 Feet

Data: NRCS SSURGO Database, Columbia County Planning Department.
Base Map: ESRI/NAIP Basemap 'World Imagery', 2017.

MAP LOCATION



Hecate Energy

MAPPED SOILS IN THE PROJECT AREA

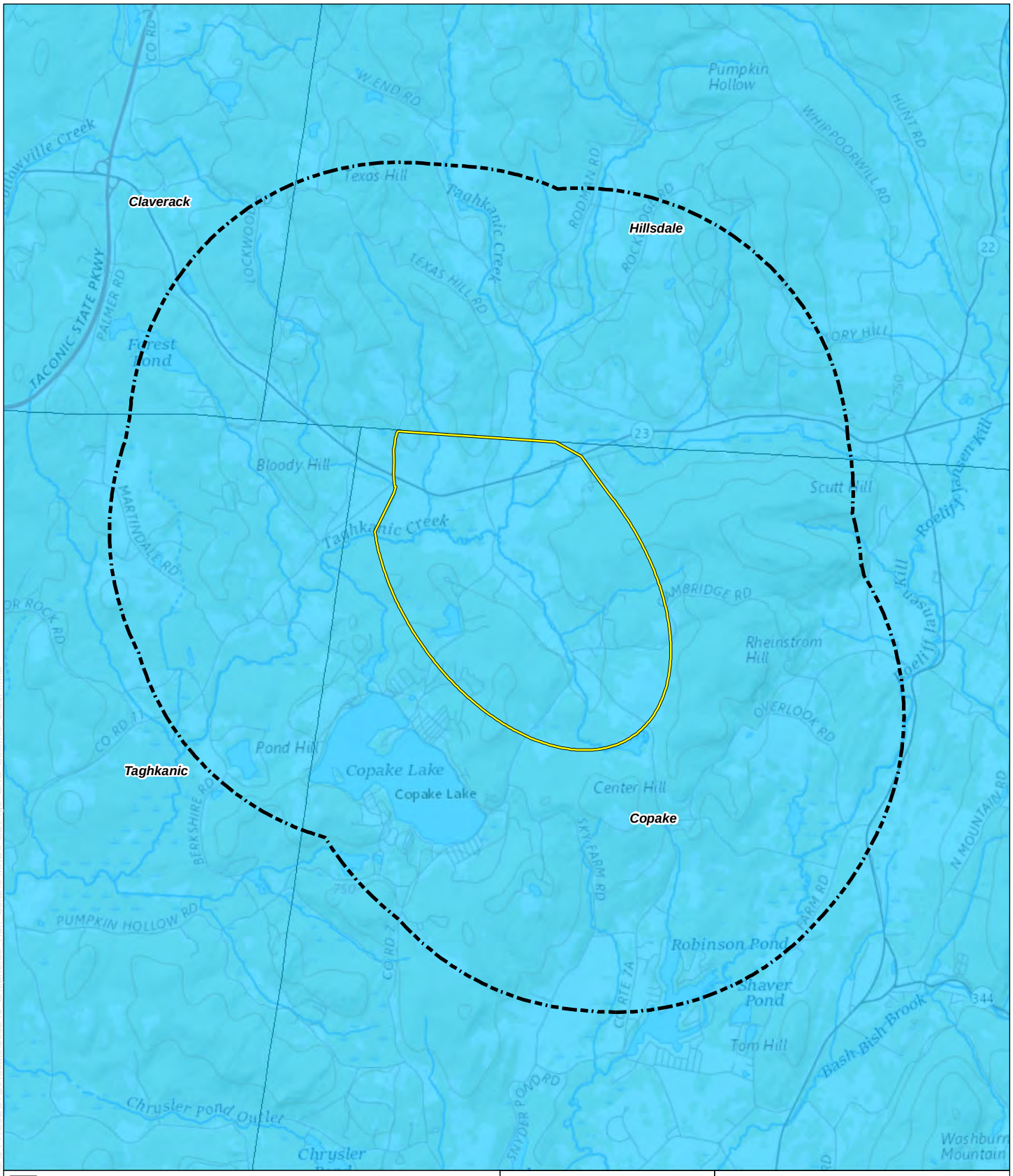
SHEPHERD'S RUN SOLAR

TOWN OF COPAKE, COLUMBIA COUNTY, NY

FIGURE 8	JULY 2020

Map Produced by TRC

S:\1-PROJECTS\Hecate\365245 Shepherds Run Solar\6-MXD\PSS\Fig8_SRS_Soils_8x11P.mxd



PROJECT AREA
2-MILE STUDY AREA
TOWN BOUNDARY

Peak acceleration, expressed as a percent of standard gravity (g)
6

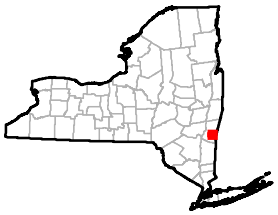
N

1 inch = 5,280 feet

0 0.5 1 Miles

Data: USGS 2016..
Base Map: ESRI USGS Topographic Basemap 'National Map', 2018.

MAP LOCATION



Hecate Energy

SEISMIC HAZARD
IN THE PROJECT AREA
2% PROBABILITY OF EXCEEDANCE IN 50 YEARS
SHEPHERD'S RUN
SOLAR
TOWN OF COPAKE, COLUMBIA COUNTY, NY

FIGURE 9	JULY 2020

Map Produced by TRC

S:\1-PROJECTS\Hecate\365245_Shepherds_Run_Solar\6-MXD\PSSI\Fig9_SRS_Seismic_8x11P.mxd

PROJECT AREA
2-MILE STUDY AREA
PRINCIPAL AQUIFERS
TOWN BOUNDARY

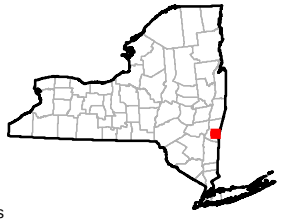
N

1 inch = 5,280 feet

0 0.5 1 Miles

Data: NYSDEC, Columbia County Planning Department 2020.
Base Map: ESRI USGS Topographic Basemap 'National Map', 2018.

MAP LOCATION



Hecate Energy

GROUNDWATER AQUIFERS IN THE STUDY AREA

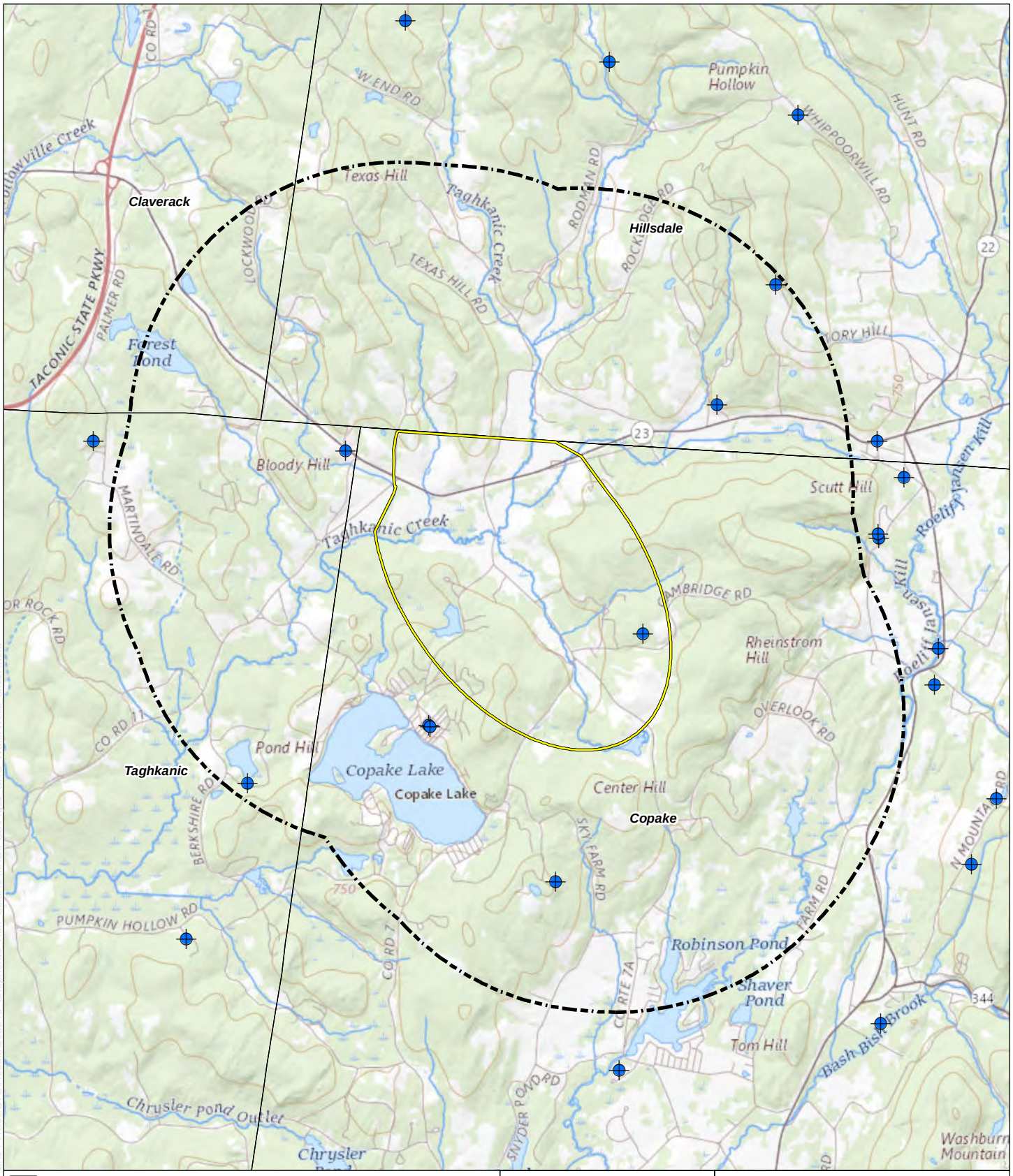
SHEPHERD'S RUN SOLAR

TOWN OF COPAKE, COLUMBIA COUNTY, NY

FIGURE 10	JULY 2020

Map Produced by TRC

S:\1-PROJECTS\Hecate\365245_Shepherds_Run_Solar\6-MXD\PSS\Fig10_SRS_GWAquifers_8x11P.mxd



PROJECT AREA
2-MILE STUDY AREA
WATER WELLS BASED ON NYSDEC MAPPING
TOWN BOUNDARY

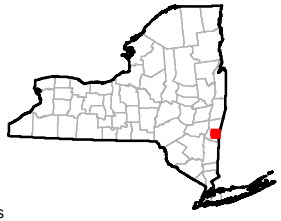
N

1 inch = 5,280 feet

0 0.5 1 Miles

Data: NYSDEC, NYGIS Clearinghouse 2016.
Base Map: ESRI USGS Topographic Basemap 'National Map', 2018.

MAP LOCATION



Hecate Energy

MAPPED WATER WELLS IN THE STUDY AREA

SHEPHERD'S RUN SOLAR

TOWN OF COPAKE, COLUMBIA COUNTY, NY

FIGURE 11	JULY 2020

Map Produced by TRC

S:\1-PROJECTS\Hecate\365245_Shepherds_Run_Solar\6-MXD\PSS\Fig11_SRS_WaterWells_8x11P.mxd

- PROJECT AREA
- NYSDEC STREAM CLASSIFICATION
- NYSDEC WETLANDS
- NWI WETLANDS
- TOWN BOUNDARY

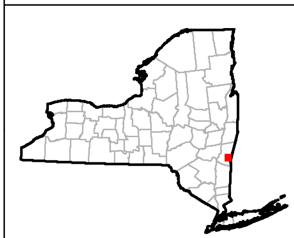
N

1 inch = 2,000 feet

0 1,000 2,000 Feet

Data: NYSDEC, NYGIS Clearinghouse 2020.
Base Map: ESRI/NAIP Basemap 'World Imagery', 2017.

MAP LOCATION



Hecate Energy

MAPPED STREAMS AND WETLANDS IN THE PROJECT AREA

SHEPHERD'S RUN SOLAR

TOWN OF COPAKE, COLUMBIA COUNTY, NY

FIGURE 12	JULY 2020

Map Produced by TRC

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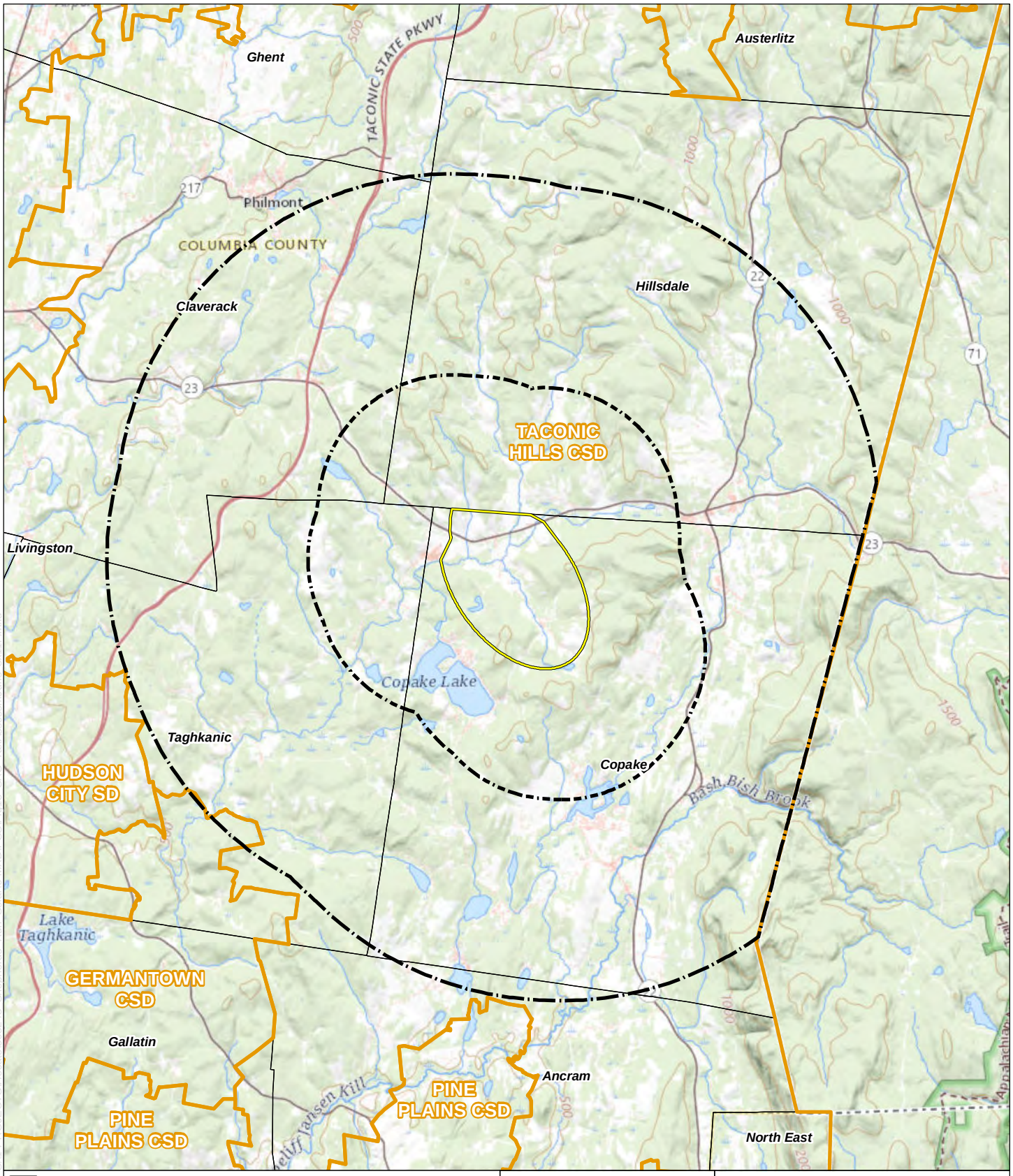


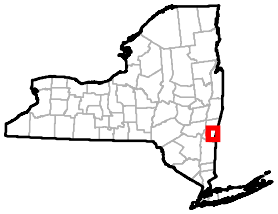
PROJECT AREA
SCHOOL DISTRICTS
2-MILE STUDY AREA
5-MILE VISUAL STUDY AREA
TOWN BOUNDARY

N

0 1 2 Miles

Data: NYS Education Department, NYGIS Clearinghouse 2018.
Base Map: USGS National Map, 2018

MAP LOCATION



Hecate Energy

TAX ASSESSMENT JURISDICTION IN THE STUDY AREA

SHEPHERD'S RUN SOLAR
TOWN OF COPAKE, COLUMBIA COUNTY, NY

FIGURE 13	JULY 2020

Map Produced by TRC

S:\1-PROJECTS\Hecate\365245_Shepherds_Run_Solar\6-MXD\PSS\Fig13_SRS_TaxAssessmJuris_8x11P.mxd

APPENDIX A.

PIP MEETING LOG

Shepherd's Run PIP Log

	Stakeholder	Date	Location	Attendees	Purpose	Follow-Up Action Items	Comments
1	Scenic Hudson	01/07/20	Phone	Gabe Wapner, Audrey Friedrichsen	Gabe requested a meeting to provide and update on the project	Set up meeting	
2	Jeanne Mettler	01/09/20	Email	Jim McGowan, Alex Campbell, Phil Wellner	Sent email and covering letter to Jeanne Mettler RE the Project	Set up meeting to introduce team and project with Town Board members	
3	Harlem Valley Rail Trail	01/16/20	Email and Phone	Alex Campbell, Lisa DeLeeuw	Alex discussed the project with Lisa and introduced Hecate. Lisa offered support	Hecate team will keep Lisa updated on the Project's progress	
4	Jeanne Mettler	01/20/20	Email	Phil Wellner	Followup on Jan 9 email and covering letter	Set up meeting to introduce team and project with Town Board members	
5	Audobon Society	01/21/20	Phone (and message)	Alex Campbell and main line phone for Audobon Society	Alex called to introduce the project and Hecate to Audobon Society	Call again	
6	Scenic Hudson (SH) and Columbia Land Conservancy (CLC)	01/23/20	In person meeting in Chatham, NY	Peter Paden (CLC), Audrey Friedrichsen (SH), Hayley Carlock (SH), Christine Vanderland (CLC), other members of CLC and SH, Jim McGowan (Hecate), Gabe Wapner (Hecate), Alex Campbell (Hecate)	Introduce project	Send power point presentation discussed. Share key benefits of project	
7	Town Board Members	01/23/20	Town Hall - Copake	Jeanne Mettler, Richard Wolf, Robert Haight, Jim McGowan, Gabe Wapner, Alex Campbell	Introduce project to Town and Planning Boards	Send power point presentation discussed. Share key benefits of project	
8	Jeanne Mettler	01/28/20	Email	Jeanne Mettler, Alex Campbell CLC, Gabe Wapner, Jim McGowan	Introduce Jeanne to NYSERDA, CLC and SH with their respective contacts	Send an email to NYSERDA, Scenic Hudson, CLC to introduce Jeanne per Jeanne request	
9	Jeanne Mettler	02/03/20	Email	Jeanne Mettler, Alex Campbell	Notified Jeanne of our press release issued to Register Star and Columbia Paper	n/a	
10	Anne Reynolds	02/03/20	Email	Anne Reynolds (ACE), Alex Campbell	Notified Anne of our press release issued to Register Star and Columbia Paper	n/a	
11	Diane Valden	02/03/20	Phone Call	Diane Valden (the Columbia Paper), Alex Campbell	Diane interviewed Alex regarding the press release on the project for an article to be published on Feb 6	Send Diane Article 10 link	
12	Abby Hoover	02/04/20	Phone Call	Abby Hoover (the Register Star), Alex Campbell	Abby interviewed Alex regarding the press release on the project	n/a	
13	Peter Cipkowski	02/05/20	Email	Peter, Alex Campbell, Jim McGowan, Gabe Wapner, Phil Wellner	Email with attached press release noting Columbia Paper will issue an article about the project on Feb 6 and general introduction	n/a	
14	Mr. Baker (Crarryville FD)	02/05/20	Email	Mr. Baker, Alex Campbell, Jim McGowan, Gabe Wapner, Phil Wellner	Email with attached press release noting Columbia Paper will issue an article about the project on Feb 6 and general introduction	n/a	
15	Dr. Neil Howard (Taconic Hills Superintendent)	02/05/20	Email	Dr. Howard, Alex Campbell, Jim McGowan, Gabe Wapner, Phil Wellner	Email with attached press release noting Columbia Paper will issue an article about the project on Feb 6 and general introduction	n/a	
16	Jeanne Mettler	02/10/20	Email	Jeanne, Jim McGowan, Alex Campbell, Gabe Wapner	Forwarded copy of the project PIP to Supervisor Mettler as requested.	n/a	
17	Peter Cipkowski	02/13/20	In person meeting (Hillsdale)	Peter Cipkowski, Phil Wellner, Jim McGowam	Project Introduction meeting with Hillsdale Town Supervisor, Peter Cipkowshi.	n/a	
18	Copake Town Board meeting	02/13/20	In person (Copake)	Jim McGown, Copake Town Board and public.	Observe discussions regarding project and other Town issues.	n/a	
19	Texas Contractor	02/19/20	Phone Call	Jim McGowan and Texas Contractor	Discussed civil work scope during the construction and approximate RFP date.	n/a	Add to vendor list
20	Save Crarryville	02/21/20	Phone Call	Jim McGowan and Jamie Carano	Provided information regarding the project and and how to include Save Crarryville on the project notification list.	Add Save Crarryville to the notification list in the PIP.	
21	Mathew DeRussio	02/26/20	Phone Call	Jim McGowan and Matt DeRussio	Provided information regarding the project location.	n/a	
22	Jeanne Mettler	03/06/20	Email	Jeanne Mettler, Richard Wolf, Alex Campbell, Jim McGowan, Gabe Wapner	Email to give Town a heads-up that Article 23 was recently introduced and that Hecate was unaware how it could potentially affect the project	n/a	
23	Richard Wolf	03/11/20	Phone Call	Alex Campbell and Richard Wolf	Discussed the upcoming Town Board Resolution	n/a	
24	Mr. Bill Baker (Crarryville FD)	03/12/20	In person meeting (Hillsdale)	Alex Campbell, Bill Baker, Dell (Crarryville FD), and Phil Wellner	Discussed the project and how the project will interact with the local FD and what the FD wants from the project	Keep Mr. Baker updated and inform him on 1) access 2) emergency shut off procedures and 3) who to contact	
25	Save Crarryville	03/12/20	Phone Call	Alex Campbell and Jamie Carano	Discussed project schedule and Siting Board local representative selection process	Send Jamie a genertic Article 10 schedule process	
26	Richard McCormack	03/19/20	Phone Call	Alex Campbell and Richard McCormack	Discussed the project and habitat impact	Email Richard Alex's contact	
27	Nora Mishanec	03/24/20	Email	Alex Campbell and Nore Mishanec	Set up time to discuss project updates	Nora to revert with timing that works for her and Abby Hoover of Columbia Green Media	
28	Peter Cipkowski	03/27/20	Email	Jim McGowan and Peter Cipkowski	Requested from Hillsdale Town Supervisor Peter Cipkowski the names of additional town officials to add to the Master Stakeholder List	Add the names of the additional Hillsdale stakeholders once received.	
29	Lloyd Pasach	04/07/20	Email	Alex Campbell and Lloyd Pasach	Respond to Lloyd's email inquiry about the Project Status	n/a	
30	Tristan Mills	04/09/20	Email	Alex Campbell and Tristan Mills	Respond to Tristan's email inquiry about the Project Status	n/a	
31	Grant Brightman	04/19/20	Email	Gabe Wapner and Grant Brightman	Respond to vendor inquiry	n/a	Add to vendor list
32	Jamie Carano	04/29/20	Email	Alex Campbell and Jamie Carano	Hecate outreach	n/a	
33	Thad Harshberger	05/01/20	Phone Call	Alex Campbell and Thad Harshberger	Respond to voicemail	Add Thad to stakeholder list (thadrh@gmail.com)	Discussed property values for his home sale. His realtor had offered some information that he wanted to confirm about the project.
34	Ralph Taccone	05/07/20	Phone Call	Alex Campbell and Ralph Taccone	Respond to voicemail	Add Ralph and Terry Tree & Ironwork to vendor list for land clearing, tree service in 500 mile radius from Rochester	Add to vendor list (585-436-2900 ext 168 and his email is rtaccone@terrytree.com)
35	Town of Copake	05/14/20	Zoom	Alex Campbell, Town Board and Town stakeholders	Attend monthly Town Board meeting	n/a	
36	Richard Wolf	05/15/20	Phone Call	Alex Campbell and Richard Wolf	General Outreach	Call Richard back week of 5/18	
37	Richard Wolf	05/19/20	Phone Call	Alex Campbell and Richard Wolf	General Outreach	Coordinate with Richard when we distribute Information packet for open house mailer	
38	Lisa Deleeuw	05/20/20	Phone Call	Alex Campbell and Lisa Deleeuw	Discussed positioning of HVRT through project	Lisa will put Alex in touch with landscape architect	
39	Jamie Carano	5/272020	Email	Alex Campbell, Jamie Carano, Jim McGowan	Include Save Crarryville LLC in Master Stakeholder List	**Include Save Crarryville LLC in the Master Stakeholder List**	Include Save Crarryville LLC in the Master Stakeholder List under Public Interest groups
40	Richard Wolf	05/30/20	Phone Call	Alex Campbell and Richard Wolf	Discuss virtual open house	Alex to text Richard when information packets will be printed and delivered to Town Hall	
41	Diane Valden	06/02/20	Phone Call	Alex Campbell and Diane Valden	Discuss 94c vs Article 10	n/a	
42	Jamie Carano	06/04/20	Email	Alex Campbell, Jamie Carano, Jim McGowan	Let Jamie know Save Crarryville LLC was included in the Master Stakeholder List and the list will be updated in July	n/a	
43	Linda Miller	06/03/20	Phone	Alex Campbell and Linda Miller	Discussion of Project donation of $7000 to Roe Jan Food Pantry	Alex to share Roe Jan Food Pantry's address and Hecate's donating entity name	
44	Linda Miller	06/08/20	Email/Phone Call	Alex Campbell and Linda Miller	Linda sent a receipt of the $7000 donation	n/a	
45	Diane Valden	06/16/20	Email/Phone Call	Alex Campbell, Diane Valden	Answer DV's questions regarding Richard Wolf town Board meeting statements	n/a	
46	Richard Wolf	06/16/20	Phone Call	Alex Campbell, Richard Wolf	General Check-in phone call and update on physical IOH materials deliver	n/a	
47	Paul Parzuchowski	06/26/20	Email	Alex Campbell, Diane Valden, Paul Parzuchowski	Paul P. said he did not receive a postcard for the internet open house.	AC set up a time to have a phone call to discuss Paul's issues with the project	Hecate confirmed that Paul received a postcard to the PO Box listed in the county ownership records
48	Fran Miller	06/30/20	Email/Phone Call	Alex Campbell and Fran Miller	Discussed the project benefits and clarified that project generation will go to Zone F (regional grid) and that the project is studying 900 acres and does not intend to build on anywhere near that amount of land	Alex to send Fran the next town board meeting schedule for her to attend	
49	Dr. Neil Howard	06/30/20	Email	Alex Campbell, Jim McGowan, Dr. Neil Howard	Alex reaching out to give Dr. Howard a project update and understand how the project's dollars could support the school	Dr. Howard to call Alex	
50	Lindsay Lebrecht	07/02/20	Phone Call	Alex Campbell and Lindsay Lebrecht	Introductory call to introduce Alex to Lindsay and hear concerns of Lindsay	Lindsay to call Alex back after holiday weekend	Lindsay mentioned a concern about wildlife
51	Richard Wolf	07/02/20	Text	Alex Campbell and Richard Wolf	Alex requested a time slot in the upcoming July Town Board meeting to provide a project update	Richard to request a time slot and he confirmed over text	
52	Fran Miller	07/09/20	Email	Alex Campbell and Fran Miller	Alex and Fran discussed the merits of the project and Alex corrected some common misinformation points Fran had heard		
53	Town of Copake	07/09/20	Zoom	Alex Campbell and the Town of Copake	Alex introduced himself and updated the Town on the project and then offered time for a Q&A session		
54	Diane Valden	07/10/20	Phone call	Alex Campbell and Diane Valden	Discussed the public involvement process and timing		
55	Fran Miller	07/10/20	Phone call/email	Alex Campbell and Fran Miller	Discussed the project and whether there was any chemicals in the panels and where the electricity from the project goes		
56	Jeanne Mettler/Richard Wolf	07/10/20	Email	Alex Campbell, Jeanne Mettler, Richard Wolf, Gabe Wapner, Jim McGowan	Alex reached out to ask if the Town could post a link on the Town's website to the Shepherd's Run website since town residents requested more access to information. Alex also requested assistance on posting a weekly Zoom link (at the developers suggestion) to the Town's website so residents could access weekly meeting information to learn more about the project	Both requests were denied by the Town	

	Stakeholder	Date	Location	Attendees	Purpose	Follow-Up Action Items	Comments
57	Joseph Kasper	07/13/20	Phone call/email	Alex Campbell and Joseph Kasper	Joe and Alex discussed the project and Joe's three main concerns: 1) aesthetics, project benefits, scale	Alex to send Joe more information on the project and set up time to meet with he and his neighbors in a small group to discuss the project	Add to Master Stakeholder List
58	Diane Valden	07/15/20	Phone call	Alex Campbell and Diane Valden	Diane wanted to clarify the public involvement process after the Town Board meeting	Alex noted that the 2 week comment period was for the internet open house materials but that the public involvement process is continual until a permit is awarded	
59	Fran Miller	07/17/20	Email	Alex Campbell and Fran Miller	Fran emailed noting that she believed the Project was too large and that there needed to be expert hearings from experts in a series of public gatherings in order for the community to learn more about the project	Alex responded noting that scale is important to compete with fossil fuel generating technologies and that it is still unsafe to have large gathers and that there is a hearing process in Article 10 and offering a link to DPS FAQs RE Article 10	
60	Harry Carlson	07/17/20	Phone/Email	Alex Campbell and Harry Carlson	Return phone call. Harry had tried to develop a solar field on his property (43 acres) near Copake Lake		Harry suggested created a 3d visual rendering of the project and show people visual mitigation strategies.
61	Jeff Wood	07/20/20	Phone Call	Alex Campbell and Jeff Wood	Jeff wanted to let us know the website wasn't working but we found out he had mis-typed the web address.	Keep him informed and let people know how visual impacts can be mitigated and how the tax dollars will be used	
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APPENDIX B.

COPY OF PSS NOTICE

Shepherd's Run Solar Project
Case 20-F-0048
60-Megawatt Solar Generation Project, Town of Copake, Columbia County, New York

NOTICE OF SUBMISSION OF PRELIMINARY SCOPING STATEMENT

Hecate Energy Columbia County 1 LLC ("Hecate Columbia") is seeking authority from the New York State Board on Electric Generation Siting and the Environment (the "Siting Board") to construct a 60-megawatt (MW) solar photovoltaic electric generating facility ("Shepherd's Run Solar Project" or the "Project") in the Town of Copake, Columbia County, New York, pursuant to Article 10 of the New York State Public Service Law. Hecate Columbia hereby provides notice that it will file a Preliminary Scoping Statement ("PSS") with the Siting Board on or about July 22, 2020. The PSS will summarize the proposed scope of studies that Hecate Columbia will undertake, the results of which will form the basis of its Article 10 Application to the Siting Board. Hecate Columbia also seeks input from the public, interested agencies, and local municipalities on the scope and methodology of proposed studies to be conducted.

The Project components will include commercial-scale solar arrays, access roads, buried (and possibly overhead) electric collection lines, electrical interconnection facilities, and, potentially, an energy storage system. The interconnection facilities will consist of a new 34.5kV-115kV collection substation and the point of interconnection ("POI"), which will be at the existing 115kV Craryville substation owned and operated by New York State Electric & Gas ("NYSEG"). The proposed collection substation and interconnection facilities will be located on land in the northwestern portion of the Project Area. The Project is proposed to be constructed on land leased from private landowners.

The Project will safely generate enough clean, renewable electricity to power approximately 15,000 households. The Project will offset air emissions from other sources of electrical generation such as fossil fuel powered generation plants and will be consistent with New York State's policies promoting renewable energy goals, including the 2015 New York State Energy Plan (as amended), the Clean Energy Standard, and the New York State Climate Leadership and Community Protection Act, which requires that 70% of the State's electricity be generated by renewables by 2030 and that all power-sector emissions be eliminated by 2040.

Based upon reasonably available information, the PSS will describe the scope of review and proposed studies to be performed under Article 10, including the environmental setting of the Project, environmental and health considerations to be evaluated, as well as construction, operation and decommissioning of the Project, proposed benefits of the Project, and Project security.

With the PSS, Hecate Columbia will also submit $21,000 in intervenor funding. Interested parties may apply for intervenor funding to be used to pay for expenses such as administrative, attorney, and/or consultant fees. A guide to applying for intervenor funding can be found on the New York State Department of Public Service's ("DPS") website by using the following direct link: goo.gl/avcprS.

Within 21 days after the date on which the PSS is filed, any person, agency, or municipality may submit comments on the PSS by serving such comments on Hecate Columbia at the address provided below, and filing a copy with the Secretary to the Siting Board. Comments must reference Case 20-F-0048 and may be submitted to Hon. Michelle L. Phillips, Secretary to the Siting Board, New York State Public Service Commission, Agency Building 3, Albany, NY 12223-1350 or electronically to secretary@dps.ny.gov. Any interested person may also file a request with the Secretary to receive copies of all notices concerning the Project, including notices regarding any proposed pre-application stipulations. Documents filed in this proceeding may also be viewed at the DPS website located at www.dps.ny.gov by clicking "Search" on the homepage and then entering Case 20-F-0048 in "Search by Case Number."

Within 21 days after the closing of this comment period, Hecate Columbia will prepare a summary of the material comments and its replies thereto, and file and serve the summary in the same manner as Hecate Columbia files and serves the PSS.

Not less than 22 days after the PSS is filed, an Administrative Law Judge ("ALJ") will hold a conference to, among other things, initiate the stipulation process in which Hecate Columbia and other parties attempt to negotiate and agree on the studies and other issues to be addressed in the Article 10 Application. The ALJ will also issue a notice of availability of pre-application intervenor funds, which will provide a schedule and instructions on how interested parties may apply for such funds. Requests for intervenor funds are due within 30 days of issuance of the notice. A pre-application meeting will also be convened to consider funding requests no less than 45 but no more than 60 days after the filing of the PSS.

Hecate Columbia will use the results of the studies it conducts to prepare the Application, which will be filed not less than 90 days after the PSS is filed. The Application will include, amongst other topics, a description of the Project, an evaluation of the environmental and health impacts and avoidance/mitigation measures, a summary of public involvement activities, a statement of why any local laws or ordinances should not be applied, electrical interconnection and system reliability studies, security and emergency plans, a statement demonstrating compliance with the most recent State Energy Plan, and other relevant information.

The Siting Board will then determine whether the Application is compliant with filing requirements. Once it is deemed compliant, the ALJ will schedule a public hearing and issue a notice that additional intervenor funds, in the amount of $60,000, will be available for parties participating in the Application phase. The ALJ will also schedule a pre-hearing conference to identify intervenors, award intervenor funds, identify issues for hearings, and establish a case schedule. After the hearings, intervenors may submit briefs to the ALJ who will then issue a recommended decision, upon which the Siting Board will render its decision on whether to certify the Project. State law requires that the Siting Board must render a decision on the Application within 12 months of its determination that the Application is compliant with filing requirements.
Additional information on how to participate in Siting Board matters may be obtained by contacting Hecate Columbia's project representative or the Siting Board Public Information Coordinator:

Hecate Columbia Representative
Alex Campbell
621 W. Randolph Street
Chicago, Illinois 60661
Telephone: 312-722-5900
contact@shepherdsrunsolar.com

Siting Board Public Information Coordinator
James Denn
NYS Department of Public Service
3 Empire State Plaza
Albany, NY 12223
Telephone: 518-474-7080
james.denn@dps.ny.gov

To find more information, please go to the Siting Board's website (www.dps.ny.gov/SitingBoard) or the Project website (http://www.shepherdsrunsolar.com/) or call the Project's toll-free number: (833) 529-6597.

Hard copies of the PSS will also be available for review at the following local document repositories:

- Town of Copake Town Hall, 230 Mountain View Rd, Copake, NY 12516
- Roeliff Jansen Community Library, 9091 State Route 22, Hillsdale, NY 12529

APPENDIX C.

PIP PLAN

REVISED PUBLIC INVOLVEMENT PROGRAM PLAN

SHEPHERD'S RUN SOLAR PROJECT

Town of Copake
Columbia County, New York

Case No.: 20-F-0048

Prepared for:

Hecate Energy Columbia County 1 LLC
621 W. Randolph Street
Chicago, Illinois 60661
Tel: 312-722-5900
Fax: 312-284-4514

Prepared by:

TRC
10 Maxwell Drive, Suite 200
Clifton Park, NY 12065
Tel: (518) 348-1190

April 2020

Table of Contents

Figures

Appendices

List of Acronyms

AC	alternating current
ACENY	Alliance for Clean Energy New York, Inc.
CES	Clean Energy Standard
DC	direct current
DMM	Document and Matter Management
DOE	Department of Energy
ESS	Energy Storage System
FAA	Federal Aviation Administration
GIS	Geographic Information System
GW	gigawatt
HCA	Host Community Agreement
IPP	Independent Power Producers
kV	kilovolt
LFIP	Large Facility Interconnection Procedures
MW	megawatt
MWh	megawatt-hour
NYCRR	New York Codes, Rules, and Regulations
NYISO	New York Independent System Operator
NYSDEC	New York State Department of Environmental Conservation
NYSDPS	New York State Department of Public Service
NYSERDA	New York State Energy Research and Development Authority
PILOT	payment in lieu of taxes
PIP Plan	Public Involvement Program Plan
POC	point of contact
POI	point of interconnection
PPA	Power Purchase Agreement
Project	Shepherd's Run Solar Project
Project Area	locations being evaluated for placement of permanent Project facilities, including the proposed collection substation and interconnection facilities
PSC	Public Service Commission
PSL	Public Service Law
PSS	Preliminary Scoping Statement

PV	photovoltaic
SCADA	supervisory control and data acquisition
SEP	2015 New York State Energy Plan
SRIS	System Reliability Impact Study
Siting Board	New York State Board on Electric Generation Siting and the Environment
Stakeholders	defined by NYCRR 1000.2(an) as those persons who may be affected or concerned by any issues within the Siting Board's jurisdiction relating to the proposed major electric generating facility and any decision being made by it
Study Area	all areas within two (2) miles of the Project Area property boundaries
US	United States
USEPA	United States Environmental Protection Agency

1.0 INTRODUCTION

Hecate Energy Columbia County 1 LLC (the Applicant), a subsidiary of Hecate Energy LLC (Hecate Energy), proposes the construction of the Shepherd's Run Solar Project, a 60-megawatt (MW) photovoltaic (PV) solar energy generation facility and associated infrastructure (the Project) in the Town of Copake, Columbia County, New York. The Project is proposed within several non-contiguous areas along State Route 23 and County Route 7 expected to total approximately 900 acres once the site layouts are finalized (the Project Area) (Figure 2). Not all of the land included in the Project Area will be included in the final Project footprint; rather, the Project Area represents the broader area within which selected areas will be developed with solar facilities. In order to minimize visual and environmental impacts, Hecate is conducting site surveys on the Project Area to site the Project, however, the footprint of the Project is anticipated to be approximately 400-500 acres.

In accordance with Article 10 of the Public Service Law (PSL) and Part 1000 of the New York State Board on Electric Generation Siting and the Environment's (Siting Board's) rules, the Applicant is submitting this Public Involvement Program (PIP) Plan to the New York State Department of Public Service (NYSDPS) for review and comment.

Given the proposed size of the Project, it is considered a "major electric generating facility" under Article 10 of the New York State Public Service Law. Generally, Article 10 provides for the siting review of new major electric generating facilities in New York State by the Siting Board in a unified proceeding instead of requiring a developer of such a facility to apply for numerous state and local permits. The PIP Plan is a very important part of this process. The information that the Applicant receives through its public outreach program will assist in defining the scope of the studies that will ultimately form the basis of the Application to the Siting Board. Through this process, stakeholder concerns, interests, local knowledge, and recommendations will be evaluated, addressed, and considered by the Applicant and Siting Board.

Article 10 of the PSL and its associated regulations govern the process for developers to apply for siting review by the Siting Board. The Article 10 process enables developers to permit a major electric generation facility in a single unified proceeding at the state level. Creation and submission of the PIP Plan is the first formal step toward certification under Article 10, with submission required at least 150 days prior to the Applicant filing a Preliminary Scoping Statement (PSS). The Article 10 regulations (16 NYCRR § 1000.4(c)) require a PIP Plan to include:

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

The Applicant values its relationships with local stakeholders, and, before undertaking necessary approval processes for and development of any project, Hecate Energy conducts public outreach to educate interested parties on aspects of a proposed solar project. The purpose of this PIP Plan is to introduce the Applicant and the Project to the public; identify state and local stakeholders and engage them, other interested parties, and the general public in the Article 10 process; and explain how the Applicant's efforts will satisfy New York legal and regulatory requirements. As with all Article 10 PIP Plans, the results of the Applicant's outreach efforts described herein will inform its PSS and Application. Throughout the advancement of Project development, the Applicant will continue to seek to determine the interests and address the concerns of stakeholders. Through this process, stakeholder concerns can be evaluated, addressed, and considered by the Siting Board.

In accordance with the Siting Board's rules and 16 NYCRR § 1000.4, the Applicant respectfully submits this PIP Plan to the NYSDPS for review and comment.

2.0 DESCRIPTION OF HECATE AND THE SHEPHERD'S RUN SOLAR PROJECT

2.1 Company Profile

The Applicant is a wholly owned subsidiary of Hecate Energy. Headquartered in Chicago, Illinois, with offices in Connecticut, Ohio, and California, Hecate Energy is uniquely qualified to carry out a wide range of development projects, at any stage, with an unmatched level of energy, professionalism, and dedication. Founded in 2012 by a team of industry veterans who have worked together for over 20 years, Hecate Energy has entered into over 1.4 GW of renewable PPAs, including over 250 MWh of battery storage contracts. To date, Hecate Energy has developed and built 363 MW of operating solar projects and 58 MWh of battery storage projects totaling over $600 million in asset value. The Company is in offtake negotiations for an additional 1 gigawatt (GW) of new solar PPAs and has an active development pipeline of over 8 GW of renewable projects.

2.2 Project Summary

The Project, as proposed, will have a capacity of 60-MW Alternating Current (AC). The Applicant began developing the Project in July 2017 with a vision of bringing utility-scale solar power to New York. The Project is consistent with the most recent State Energy Plan, the Public Service Commission's (PSC) Clean Energy Standard (CES), and the Climate Leadership and Community Protection Act, all of which support the development of clean energy and renewable resources in New York State. The Project will safely generate enough clean, renewable electricity to power over 15,000 New York households. The Project will also provide a significant economic stimulus to the area during construction by providing jobs and local contracts for goods and services, and significant long-term economic benefits through lease revenue to local landowners and tax revenue to the community.

The first and foremost factor for siting a solar facility is finding a transmission line with sufficient existing capacity so the power from the project may be added to the utility system without prohibitive cost. To meet a societal need for additional renewable power and New York State's policy goals, the project needs to be both clean *and* affordable. Therefore, the cost to interconnect the project to the transmission system is a major factor in Project siting. For this Project, the point of interconnection (POI) will be between a new Project substation and the Craryville 115-kilovolt (kV) substation, off of which the Craryville-Klinekill and Churchtown-Craryville 115-kV transmission lines extend. This POI was selected based on a regional analysis of capacity and

detailed analysis of the substation and transmission lines. These transmission lines, which are owned and operated by New York State Electric & Gas (NYSEG), cross the Project Area. The Craryville substation is located amidst the Project Area, just north of Main Street (Route 23) (see Figure 2).

The selection of appropriate sites for a solar-powered electric generation facility is constrained by numerous other factors that are essentially considerations for a project to operate in a technically and economically viable manner. Other important factors include the availability of open and appropriately oriented land, willing land lease participants, and preliminary environmental screenings that have not indicated any significant wildlife habitat or other environmental or societal concerns.

The lands that are being evaluated for potential solar development are located in the Town of Copake, Columbia County, New York, and are identified on Figures 1 and 2 as the "Project Area." As stated in Section 1.0, not all the land included in this area will be included in the final Project footprint; rather, the Project Area represents the broader area within which selected areas will be studied and eventually developed with solar facilities. This provides flexibility during Project development to minimize and avoid impacts to wetlands, cultural resources, visual resources, wildlife habitat, and other sensitive resources. The Project will ultimately be sited within the approximately 900-acre Project Area, which consists primarily of agricultural land. The Applicant is leasing land from private landowners, which will provide a stable and predictable revenue stream without having to sell their property.

The Project will use the same type of PV panels installed on over one million homes in the United States. Solar equipment is a proven, safe technology in applications from fields to rooftops of homes, schools, and businesses. At the Project, panels will be installed on a low-profile racking system that will have a small footprint, typically consisting of small steel I-beam posts driven into the ground. In addition, the PV panels proposed to be used for the Project have a low height profile. The height of each panel is planned to be 6.5 feet above the ground when flat and 9.5 feet at its highest point when fully tilted. The Project will consist of the following components:

- A solar field of single-axis tracking PV panels producing direct current (DC) electricity mounted on tracking structures that will follow the sun throughout the day;

- Inverters placed throughout the Project (internal to the panel arrays) to convert DC electricity to AC electricity;
- A medium voltage collection system that will aggregate the AC output from the inverters;
- A substation where the Project's electrical output voltage will be combined and its voltage increased to the transmission line voltage of 115 kV via step-up transformers;
- A generation tie line that will connect the Project to the designated point of interconnection;
- A switching station to inject the electricity into the grid;
- Internal infrastructure including access roads and fencing; and
- Temporary laydown areas for equipment staging during construction.

In addition, the Project may also include an Energy Storage System which is anticipated to be comprised of battery cells enclosed in modules, stacked in racks, installed within an ISO-rated container, and fixed onto concrete foundation pad/piers. Each rack will connect to a battery management system which will communicate and actively manage the performance and safety metrics of each module. It is expected that the battery storage technology will be lithium ion and will most likely be installed in 53' shipping containers. The possible location for the Energy Storage System is directly east of the NYSEG Craryville 115-kilovolt (kV) substation, along State Route 23 within the Project Area (described further in section 2.3 below). The outreach activities described in this PIP Plan will also address the Energy Storage System, in the event this option is included in the final Project design.

To deliver power to the New York State power grid, the Applicant proposes to construct a new substation for the Project that will be adjacent to and interconnect with the existing Craryville 115-kV substation, which is owned and operated by NYSEG. Two 115-kV transmission lines extend out of this Craryville substation: Craryville-Klinekill and Churchtown-Craryville. The existing Craryville substation is located along Main Street (see Figure 2). Existing aboveground transmission lines traverse the area in proximity to the proposed Project Area from this substation in a north-south and east-west orientation, respectively.

In July 2017, Hecate Energy filed one application with the New York Independent System Operator (NYISO), operator of New York's transmission system, for interconnection of the Project's 60 MW into the electrical grid. The initial Feasibility Study and System Reliability Impact Study have been completed and the Project has entered Class Year 2019 Facility Study. Securing this grid capacity at a reasonable cost is integral to the Project's economics and will allow the

Applicant to provide clean energy at an affordable rate, consistent with New York's clean energy goals.

The Project will have a nameplate capacity of 60 MW and is expected to generate approximately 110,000 MWh of energy for year one of operation. This will be enough electricity to meet the average annual consumption of over 15,000 New York households, based on average annual electric consumption of for New York State (EIA, 2015). Because solar uses no fuel, it both offsets additional air pollution from burning fossil fuels and dampens the cost of power at the time of peak conventional power cost. Solar modules have followed the same cost pattern as many other electrical devices. Module costs have fallen significantly over the last five years, dramatically changing their role in wholesale power supply.

The Project will have positive impacts on socioeconomics in the area through local employment and service opportunities, specifically by generating temporary construction employment, a significant amount of which is expected to be drawn from Columbia County and the regional labor market. Hecate Energy's contracting prefers local hiring, and it may hold a future job fair(s) as the Project enters the construction phase to support that objective. Local construction employment will primarily benefit those in the construction trades, including equipment operators, truck drivers, laborers, and electricians. It is anticipated that approximately 200 construction workers will be employed during peak construction and 2-3 full-time equivalent operations workers.

In addition, Project operation will generate several hundred thousand dollars of annual fees, some of which will be part-time employment and contracting service opportunities for electricians, operations managers, laborers and fencing contractors, and landscaping maintenance crews. The Project will also result in increased revenues to county and local municipality tax bases, purchase of local supplies and goods, and lease revenues to participating landowners.

Through very deliberate site selection, followed by careful planning and design, and by the environmentally benign nature of the technology, the Project will have minimal impacts on the surrounding community. Solar facilities have no direct air or wastewater emissions, are very quiet, and generate no vibration. The PV panels proposed to be used for the Project do not contain hazardous materials and have a low height profile. Setbacks, fencing, and landscape buffering allow solar projects to have minimal impact on the community and natural setting of the area. For the proposed Project, the Applicant will maintain 100-foot property setbacks as required by the

Town and will plant vegetation to provide a natural screen along the Project's visible areas, where practicable. At this time, details on Project fencing are not available.

Responsibly sited solar facilities can provide a net benefit to the preservation of agricultural land. The Project is not a permanent structure and security will be provided to decommission the Project at the end of its useful life, following which the land can be returned to its former use. Therefore, the land is not permanently lost to development, but temporarily converted to another productive and beneficial use. The Project essentially provides a form of preservation for agricultural land by preventing other forms of traditional development and by also preserving the farmland by improving soil quality with appropriate ground cover planting and maintaining permeable land surface. Solar projects generally have a useful life of up to 40 years. Per the requirements of 16 NYCRR § 1001.29, the Applicant will provide a decommissioning plan in the Article 10 Application that is in accordance with the Siting Board's rules, which will address financial security to be established by the Applicant to ensure proper removal of the Project and restoration of the land.

2.3 Project Area and Study Area

Figures 1, 2, and 3 show the regional Project location, the Project Area, and the preliminary Study Area, respectively.

With respect to setting, the Project Area is in an upland area along County Route 7 and State Route 23, east of the Taconic State Parkway. The Project is sited in a predominantly agricultural and institutional area characterized by rolling topography, with gently sloped areas transected by small streams and/or wetlands in the low-lying areas between elevated landforms. Existing land use in the vicinity includes a mix of developed land, agricultural production, rural residential development, and sparsely forested areas. Because of the Project's geographic location and low-profile, the Project will not be visible from nearby, more densely-populated areas. Each section of the Project will be surrounded by fencing and sections bordering public roadways or nearby residences will be designed to include landscape buffering outside the fence. Nevertheless, the Applicant will consult with NYSDPS Staff prior to the development of the PSS for the purpose of determining the appropriate Study Area for visual resource evaluation.

It is important to note that the Project will not create impervious surface, but rather will allow rainwater to fall to the ground through gaps between each panel. Additionally, the Project will not generate air emissions of any type and will not generate noise audible outside the fenced area.

Therefore, due to the nature of the technology and the setting specific to the Project, the Applicant proposes a 2-mile radius Study Area from (and including) all Project components. Figure 3 depicts the 2-mile radius Study Area extending from the Project Area. Municipalities within this Study Area include the Town of Copake, Town of Hillsdale, Town of Claverack, and Town of Taghkanic, all of which lies within Columbia County.

The PSS and the Article 10 Application will further define and describe the Study Area. For the purposes of the PIP Plan, the Study Area has been conservatively defined based on a Project Area that is much larger than the ultimate footprint of the Project. As the Article 10 process continues, specific Project component locations will be identified and discussed with the public, stakeholders, and the affected agencies through the PIP Plan provided herein.

3.0 PUBLIC INVOLVEMENT PROGRAM OVERVIEW

3.1 PIP Plan Goals

The Applicant values its relationship with local stakeholders. Before undertaking necessary approval processes for development of any project, Hecate Energy conducts public outreach to educate interested parties. The purpose of this PIP Plan is to 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 will satisfy New York's legal and regulatory requirements. As stated previously, the Applicant will continue to seek to determine the interests and address the concerns of stakeholders throughout the advancement of Project development.

The Applicant's proposed PIP Plan focuses first and foremost on early and frequent communication with Host Communities (defined further in Appendix A), including the Town of Copake and Columbia County. The PIP Plan will be made available at the document repositories listed in Section 5.9. Aside from the Town of Copake and Columbia County, there are many important stakeholders to consider in developing a solar project of this scale. The Siting Board's rules provide that a PIP Plan must include:

- Consultation with the affected agencies and other stakeholders;
- Pre-application activities to encourage stakeholders to participate at the earliest opportunity;

- Activities designed to educate the public as to the specific proposal and the Article 10 review process, including the availability of funding for municipal and local parties;
- The establishment of a website to disseminate information to the public;
- Notification; and activities designed to encourage participation by stakeholders in the certification and compliance process.[1]

It is anticipated that this will be an ongoing, evolving process throughout all phases of the Article 10 review process (pre-application phase, application phase, hearing and decision phase, and post-certification phase), intended to disseminate information regarding the Project to stakeholders, solicit information from those stakeholders during public outreach events, and generally foster participation in the Article 10 review. The Applicant has established a user-friendly website in plain English that describes the Project (shepherdsrunsolar.com). While still under initial development, this website will describe the Article 10 process and provide Project updates throughout the development and construction phases of the Project to keep the community informed of the Project's status (see Section 5.6 below for additional detail).

3.2 PIP Plan Schedule

The Applicant has already begun initial outreach activities with the local communities to introduce the Project and provide Project-related updates and will continue conducting public involvement activities during the pre-application phase. The Applicant will continue these activities throughout the Article 10 process until Project construction has been completed and commercial operation has begun. These specific activities are discussed below in Section 5.0. Additional outreach to host landowners and municipal officials will take place during decommissioning activities, which will be further discussed in the PSS and/or Application. A preliminary Project schedule is contained in Appendix D.

[1] 16 NYCRR § 1000.4(c)

4.0 STAKEHOLDERS

4.1 Identification of Stakeholders

A fundamental first step in the public outreach process for the Project is to determine the stakeholders that may be affected by construction and operation of the Project. Hecate Energy has developed numerous solar projects, with a development approach that emphasizes community outreach and education. Based on this experience, Hecate Energy has successfully engaged with interested agencies, municipalities, utilities, host landowners, and other potential stakeholders to build support for projects through education and transparency. Identification of specific stakeholders for the Project is informed by past experience and utilizes NYSDPS guidance and prior submissions of other Article 10 PIP Plans. To ensure successful identification of relevant stakeholders for the PIP Plan, the Applicant has reviewed the following resources, including stakeholders below based on the definitions of "local party" (as defined in (16 New York Codes, Rules, and Regulations [NYCRR] § 1000.2[s]) and "affected agencies" (16 NYCRR § 1000 et seq.) described in the Siting Board's rules:

- Land use plans;
- County websites;
- Town websites;
- Tax records;
- GIS resources; and
- Other independent research.

Additionally, the Applicant considered the following in compiling its list of affected agencies and other stakeholders:

- The anticipated locations of Project components within the Project Area;
- The POI;
- "Local Party," as defined in the Siting Board's rules (16 NYCRR § 1000.2[s]);
- "Affected Agencies," as that term is used in the Siting Board's rules (16 NYCRR § 1000 et seq.);
- "Host Municipalities," which for the purposes of this PIP, refer to those municipalities that are currently within the Project Area and are anticipated to host Project components (to be determined and further described in the PSS);

- Public interest groups; and
- State and federal elected officials representing the Host Municipalities and, if different, other municipalities within the Study Area.

The Applicant has developed a list of potentially interested parties from these resources, comprising the categories identified and discussed in Sections 4.2 through 4.15 of this PIP Plan.

A Master Stakeholder List (included as Attachment A to this document), which includes all known and/or potentially interested stakeholders and parties, was developed based upon the combination of efforts described above. The Applicant anticipates that the Master Stakeholder List will be updated as necessary based on information and requests from interested stakeholders received during PIP activities and these updates will be provided to NYSDPS along with the PIP tracking submissions. Materials distributed for public outreach will include information detailing how individuals and groups can be added to the Master Stakeholder List. Individuals will have various opportunities to be added to the Master Stakeholder List, including emailing a Project representative through the Project website, requesting inclusion by calling the toll-free Project telephone number, or requesting to be added to the Master Stakeholder List at an open house event. In addition, potentially affected or interested stakeholders include host landowners who have a land agreement with the Applicant, as well as adjacent landowners as defined in Section 4.14, and landowners who would normally be notified of a local town land use action.

4.2 Host Community

The host community is defined as the municipality within which the Project Area and the anticipated Project components are located (the Town of Copake). The Town Board and Planning Board representing the host community, as applicable, are considered stakeholders and have been identified through publicly available information located on town and county websites.

4.3 County Agencies

County agencies representing areas with the potential to be affected by the Project have been identified by review of the county websites and/or county GIS data and thereby identified as stakeholders.

4.4 State Agencies

State agencies specifically identified in 16 NYCRR § 1000.5 and 1000.6 have been listed as stakeholders. Additionally, departments of New York State governments were identified using Hecate Energy's experience in developing utility projects in the State.

4.5 Federal Agencies

Agencies of the U.S. government were identified using Hecate Energy's experience in developing projects in the United States, review of previous PIP Plan submittals, and NYSDPS guidance.

4.6 Legislative Representatives

Offices of the New York State Legislature, the U.S. Senate, U.S. Congress, and Columbia County Legislators representing the Project Area and Study Area were identified by review of publicly available information and have been added to the stakeholder list.

4.7 Highway Departments

State, county, and town departments responsible for managing roads in the Study Area were identified by review of town and county boundary maps, and online research.

4.8 Schools

School districts serving municipalities identified as stakeholders within the Study Area were identified by review of county tax maps and desktop analysis of publicly available data.

4.9 Emergency Responders

Emergency responders including fire departments, emergency medical services, and police or sheriff departments serving parcels in the Study Area were identified by review of county tax maps and online research. Additionally, emergency responders such as County Emergency Management, the State Police, and the County Sheriff have been identified as stakeholders and will be consulted throughout the Article 10 process where applicable.

4.10 Adjacent Municipalities

Towns, villages, or other municipalities that are not host communities but are in the Study Area have been identified as stakeholders and added to the stakeholder list by review of municipal boundary maps and GIS mapping.

4.11 Utilities

Companies that own gas, electric, or communications infrastructure in the Project Area were identified through available local and state geographic information databases, online research, and previous PIP Plan submittals. Utility companies will be contacted concerning location of facilities, design, and safety standards for construction near existing infrastructure.

4.12 Public Interest Groups

Organizations that serve interests of the public including business organizations, county and town historians, conservation, outdoor recreation or environmental organizations have been identified as stakeholders. These groups have been identified through online research.

4.13 Airports and Heliports

The Article 10 regulations require an applicant to consult with airport or heliport operators if the Project triggers the requirement that a Notice of Proposed Construction be submitted to the Federal Aviation Administration (FAA). The Project does not meet any of the requirements set forth in the FAA's regulations.[2] The Project will not involve the construction of any structure that exceeds 200 feet above ground level. A private seaplane base airport is based approximately 1.5 miles south of the Project Area; however, operations at this location would not require the Project to file with the FAA. The nearest civilian public airport, heliport, or military airport is more than 5 miles from the Project Area boundary. Consequently, the filing of a notice with the FAA will not be required for the Project. However, the Applicant has identified nearby privately owned and operated airports/heliports as stakeholders.

4.14 Host and Adjacent Landowners

Host landowners are landowners with whom the Applicant has entered (or will enter) into a lease or easement agreement. As defined in the Siting Board's rules, adjacent landowners are landowners with property within 500 feet of proposed Project components. For the purposes of this PIP Plan only, since the Project layout is still in development, the Applicant is expanding the definition of adjacent landowners to include landowners with property with 2,500 feet of the boundary of the anticipated Project Area, or within 500 feet of other Project components (e.g., collection lines, POI, operation and maintenance facility, etc.). The identities of potential host and

[2] See 14 Code of Federal Regulations § 77.9(a-e).

adjacent landowners are determined from county GIS records, tax records, and personal visits by representatives of the Applicant. Notation will be made on the updated Master Stakeholder List at the time of submittal indicating removal of a stakeholder and the reason for removal.

The final layout will be determined by incorporating further input from stakeholders, as well as processing data from fieldwork (e.g., avoidance of impacts to wetlands identified during field delineation efforts). As the Project layout evolves, some stakeholders identified as adjacent landowners may be removed while others may be added in response to changes in land acquisition and facilities siting. Therefore, specific host and adjacent landowner information is not included herein. For privacy purposes, the stakeholder list may include addresses or parcel numbers rather than landowner identification. The Applicant also has broad additional outreach planned, such as mailings and in-person gatherings to facilitate the development of this list. The Applicant will keep NYSDPS apprised of additional outreach by filing revised versions of Attachment C. The Applicant also plans to keep the Project website updated with Project development information as necessary throughout the Article 10 process. A description of the Applicant's property rights and interests will be provided in the PSS.

4.15 Area Residents

Residents of the Study Area who are not host landowners or adjacent owners are included in the Master Stakeholder List as one group. The Applicant plans to notify these residents of the Project individually by mailing an informational flyer announcing the open houses and providing general Project information to all unique addresses in the tax assessment rolls for the Study Area. At the open houses, attendees will be encouraged to join the stakeholder list if they wish to continue to receive notice of future Project milestones, such as availability of the PSS, public statement hearings, and filing of the Application. Besides the open house notifications, the Applicant does not plan additional broad mailings to area residents that do not register as stakeholders. However, these residents can still learn more about the Project through public outreach activities, notices in area newspapers, and updates on the Project website.

The Applicant will keep NYSDPS informed of additional stakeholders identified, if any, through filing revised versions of Attachment A and/or through the PSS and Application.

5.0 PUBLIC INVOLVEMENT PROGRAM ELEMENTS

Pursuant to the Article 10 regulations requiring an applicant to "encourage stakeholders to participate at the earliest opportunity," the Applicant has begun initial outreach to identified interested parties and will continue to do so throughout the Article 10 process. The Applicant plans to adapt stakeholder and outreach activities to best encourage local input and participation as the Article 10 process proceeds.

5.1 Initial Outreach and Consultation

The Article 10 regulations require an applicant to undergo both general and specific consultations with agencies and municipalities the applicant has identified as potentially affected by a project. The purpose of consultation is to provide information about the Project, Article 10, and unique aspects of the site and local community; receive and discuss stakeholder interests and issues regarding the same; and schedule follow-up consultations if appropriate. The Applicant's communications to identified parties will include (at a minimum) the following:

- A description of the Project and Project location;
- An explanation of the Article 10 process, including opportunities for participation by interested parties at each step;
- A description of the intervenor process and explanation on how to qualify for and obtain intervenor funding; and
- A request for input on the potential impacts and benefits from the Project.

As identified above, the Applicant plans to consult a broad number of stakeholders and interested parties regarding the Project. Going forward, the Applicant plans to utilize the following tools to engage identified parties, as applicable.

As an opportunity for education beyond the specifics of this Project, the Applicant intends to provide information at public meetings and open houses so as to educate the public on renewable energy as a technology and New York's unique history of renewable energy policy and regulation. At said events, the Applicant will have information available on the Article 10 process and timelines, as well as the intervenor fund (including how to participate) and opportunities for public comment. All outreach materials, including the invitation to open houses, will reference Project contact information, how the public can obtain additional information, and how to be included as

a stakeholder. This will be discussed in further detail in the following sections.

The Applicant plans to carefully track and document all above described activities and will file these logs as part of its revised Attachment C filings.

5.1.1 Stakeholder Notifications

The Siting Board's rules establish the notification requirements for serving documents. In accordance with 16 NYCRR § 1000.7, the Applicant will publish all required notices in The Register-Star, The Columbia Paper, The Columbia & Greene Shop & Find, hudsonvalley360.com, and on the Town of Copake website (see Section 5.7). The notices will be placed in a prominent location in the newspaper rather than the "legal notice" section in order to ensure visibility by the largest number of stakeholders.

As noted in Section 4.15, the Applicant intends to notify residents within the Study Area individually by mailing an informational flyer. The flyer will provide general Project information and announce the open houses to all unique addresses in the tax assessment rolls for the Study Area. Additional information on this notification is provided in Section 5.7.

The Applicant will publish a notice of the PSS and the Application filings in the newspapers listed above no fewer than three days before filing. Additionally, the Applicant will serve each member of the State Legislature whose district lies within any portion of the proposed Project Area; provide written notice to those persons who have filed a statement with the Secretary within the past 12 months that wish to receive such notices; and provide mail notification to all parties on the Master Stakeholder List. Additionally, the Applicant will publish notices on the Project website.

The Applicant will publish any other required notices in the manner prescribed by the Presiding Examiner or under the procedures contained in Article 10.

5.1.2 Collection of Stakeholder Input

For stakeholder groups, the Applicant will identify and contact the group's point of contact (POC) to introduce the Project and offer to meet with the stakeholder group or POC. At stakeholder meetings, the Applicant will introduce the Applicant's representatives and inform attendees about the Project and the overall Article 10 review process. In addition, the Applicant will request feedback on issues that stakeholders want to have considered in the Project design or review. This feedback

will be tracked in the PIP Plan Tracking Report, which is further discussed in sections below.

Individual stakeholders will be notified of several opportunities to learn about the Project and submit input, including on the Project website.

5.2 Distribution of PSS and Application Documents to Stakeholders

Stakeholders will be made aware via mail of PSS and Application availability on the Project website, the NYSDPS website, and at various public document repositories. At this time, the Applicant does not intend to provide individual hard copies of these documents to stakeholders, except as required under 16 NYCRR §§ 1000.5 and 1000.6.

5.3 Pre-Application Activities to Encourage Stakeholders to Participate

In addition to the engagement activities that have already taken place, the Applicant will continue pre-application activities to encourage stakeholder participation. The PIP Meeting Log (Appendix C) will be regularly updated as consultations and stakeholder participation activities take place, and additional means of engagement are identified (as necessary).

The Applicant plans to attend Town meetings, is planning Applicant-sponsored public information sessions, will be distributing educational materials, and will provide a Project website that will offer information on the Project, as well as links to and information on the Article 10 process, intervenor funding, and other important stakeholder issues. The educational materials discussed in this section will also be made available to the public at local document repositories which are listed on the Project website, and in Section 5.9 of this PIP Plan. These efforts will allow the Applicant to engage with stakeholders regarding the Project and will offer multiple avenues of information distribution so that stakeholders and the public have multiple, varied opportunities to obtain information on the Project and participate in the proceedings. These efforts are further detailed below.

5.3.1 Town Board Meetings

The Applicant will offer to present at scheduled Town Board meetings of the Town of Copake during the pre-Application phase. As part of the presentation, the Applicant representatives will discuss the Project, the Article 10 process, and respond to questions and receive input from the Town Boards regarding the Project. Previously, the Applicant has already met with Town of Copake representatives to introduce the Project. The meeting described above, as well as any

future attendance at Town Board meetings, are documented and will continue to be documented in the PIP Plan Meeting Log (Appendix C).

5.3.2 Open House Events

The Applicant intends to hold a minimum of two open-house-style public meetings prior to submittal of the PSS and two meetings following submittal of the PSS. The meetings will likely be held at different times on the same day. Representatives for the Applicant will be present to provide Project information and answer questions. It is anticipated that these meetings will be held at a public meeting space in reasonable proximity to the Project Area. The Applicant will conduct a mass mailing to all residents in the Study Area to announce the initial set of public meetings and will publish announcement of these meetings at least fourteen days before the events in local newspapers, including The Register-Star, The Columbia Paper, and The Columbia & Greene Shop & Find. Notification of the initial set of public meetings will also be sent via email to those email addresses obtained through stakeholder outreach. Notification of all public meetings held by the Applicant will also be mailed or emailed to the Master Stakeholders List contained in Exhibit A. Additional stakeholders will be added to this list as they are obtained through the initial public meetings and Project website. The updated list will then be used for future mail and email notifications and the list will be further updated based on additional requests. As stated in Section 5.1, invitations to open houses will reference Project contact information, how the public can obtain additional information, and how the public can be included as a stakeholder. In addition, all meetings will be posted on the Project website (shepherdsrunsolar.com), and information regarding the public meetings will be posted at local document repositories.

5.4 Project Contact Information

For the duration of the Article 10 process, the Project Representative will be available to receive and address public questions and concerns at:

Alex Campbell
Phone: (833) 529-6597 (toll-free Project number)
Email: contact@shepherdsrunsolar.com

It is not anticipated that there will be a local Project office. However, a local nearby representative will make themselves available at certain times in the Project Area to answer questions about the Project pursuant to Section 5.4.1 of the Revised PIP Plan.

5.4.1 Telephone Number

The Applicant will maintain a toll-free telephone number that includes a connection to an automated voicemail. Calls received after business hours will be handled in the same way as a message left during business hours. The phone number will be advertised on the Project website and in outreach materials and will be monitored for questions on the Project. The Applicant will endeavor to respond to all questions within 2-5 business days.

The phone number is: (833) 529-6597.

5.5 Activities Designed to Educate the Public on the Proposal, the Article 10 Review Process, and Funding

Town Board meetings and the open houses (as described above) provide multiple opportunities for the Applicant to disseminate information to the public concerning Project specifics, the Article 10 process, and the availability of funding for municipal and local parties, as well as to receive information from the public. Educational materials will be available at all meetings, including handouts on Project specifics and the public's role in the Article 10 process, intervenor funding, the decommissioning process, information on fund allocation through PILOT agreements, Project contact information, an invitation to join the stakeholder list, and the location of document repositories. All public meetings and written educational materials will also encourage interested parties to visit the Project website (described below) for information and updates. Materials and presentations will be posted on the Project website as they become available. Appendix D provides a preliminary Project schedule.

At the open house, the Applicant plans to have poster-board displays covering topics such as:

- Maps of the Project Area and Study Area;
- How photovoltaic solar energy works;
- Overview of the proposed Shepherd's Run Solar Project;
- Typical construction process for a solar energy project;
- Project schedule;
- Intervenor funding and Article 10 process (including Pre-Application stakeholder involvement and scoping process);
- Frequently asked questions (FAQs);
- Information about Hecate Energy;

- Studies expected to be required for permitting of the Project;
- Viewsheds (to the extent available); and
- Economic benefits of the Project to the local economy.

The above subjects will be elaborated further in materials that the Applicant will prepare to present and distribute using information from its knowledge of the Article 10 process, and industry sources such as New York State Energy Research and Development Authority's (NYSERDA) NY-Sun Program, the Alliance for Clean Energy New York, Inc. (ACENY), and the Department of Energy (DOE). Versions of these materials will also be made available on the Project website.

5.6 Website

The Applicant has established a user-friendly website in plain English that describes the Project. This website provides information regarding the Article 10 process and will continue to provide Project updates throughout the development and construction phases of the Project to keep the community informed of the Project's status. For example, additional maps will be added to the website as the Project layout evolves, and notices will be posted to the website prior to various milestones and public meetings/outreach events.

The Project website URL is: (shepherdsrunsolar.com). The Applicant anticipates that the website will include the following, as it becomes available:

- Project description;
- Project benefits and need;
- Summary of permitting requirements;
- Links to the Siting Board Article 10 Public Information Coordinator, the Siting Board home page, and case-specific documents;
- Information on the Article 10 process and opportunities for participation;
- Summary of the Intervenor Funding process and how to apply;
- Project contact information, including email address and toll-free telephone number;
- Copies of Article 10 and related licensing documents;
- Addresses of local document repositories;
- Link to request stakeholder status;

- A schedule that lists dates/times/locations for outreach events and key milestone dates, such as when the Application will be filed; and
- Tracking Reports summarizing the Project's PIP Plan activities to date.

As indicated above, the website includes Project contact information (email address and toll-free telephone number). Interested parties may request stakeholder status through the website. The Applicant intends to respond directly to all substantive inquiries and comments submitted to the Project contact and will document all such correspondence throughout the Application process. Email inquiries will receive an automated response acknowledging receipt of an interested party's question or comment. Email and postal addresses collected through the website will be added to the Master Stakeholder List.

5.7 Notifications

The Siting Board's rules establish the notification requirements for serving documents. Pursuant to the rules, the Applicant will publish notices of PSS and Application filing as required by 16 NYCRR § 1000.5 and 16 NYCRR § 1000.7 and provide notice in accordance with standard notice requirements for actions of the Town of Copake. This information will be published on the Project website and in the following news sources:

- The Register-Star, a paid-subscription daily newspaper serving Columbia County. https://www.hudsonvalley360.com/.
- The Columbia Paper, a paid-subscription weekly newspaper serving Columbia County. https://www.columbiapaper.com/.
- The Columbia & Greene Shop & Find, a free weekly savings guide serving Columbia and Greene Counties.
- Hudson Valley 360, a free online resource. https://www.hudsonvalley360.com/.
- Town of Copake website, a free online resource where the town publishes public notices. https://www.townofcopake.org/.

The Applicant intends to mail informational flyers to individual residents to notify them of the Project, providing general Project information and announcing the open houses to all unique addresses in the tax assessment rolls for the Study Area. In addition to mailings, the open houses will be advertised via emails to stakeholders identified in sections above, on the Project website, and in the newspapers listed above.

Instructions on how stakeholders can contact the Applicant throughout the Application and construction process will be included with mailings announcing open house information. Procedures for submitting concerns, questions, and complaints will also be detailed in the Complaint Resolution Plan to be included in the Article 10 Application.

No less than three days prior to filing the PSS and the Application, the Applicant will: publish notice of the PSS and the Application in the newspapers listed above; serve each member of the State Legislature in whose district any portion of the proposed Project is to be located; provide written notice to those persons who have filed a statement with the Secretary within the past 12 months that wish to receive such notices; and provide mail and email (if available) notification to all parties on the Master Stakeholder List. In addition, notifications will be posted on the Project website. The Applicant will publish any other notices required by the Presiding Examiner or other section of Article 10 in the manner prescribed by the Presiding Examiner or under the procedures contained in Article 10.

Additionally, the stakeholders on the Master Stakeholder List will be notified via mail when the PSS and Application filings will be available for review. Host and adjacent landowners will be included in the Master Stakeholder List prior to these notifications. The Applicant will include an updated Master Stakeholder List with these filings, including individuals and parties identified through the Applicant's outreach efforts, as well as proof that a mailing has occurred. Copies of the PSS and Application will be distributed to the local repositories listed below in addition to being posted on the Project website.

5.8 Activities Designed to Encourage Stakeholder Participation

As described previously, several activities have been identified to encourage stakeholder participation. This includes open house events as described in detail in section 5.3.2 above. Beyond the activities described above in Sections 5.1 through 5.7, the Applicant will seek to identify additional, practical measures to encourage stakeholder participation during the certification process. It is anticipated that this will be an ongoing, evolving process throughout all phases of the Article 10 review process (pre-application phase, application phase, hearing and decision phase, and post-certification phase).

The Applicant will track its PIP Plan activities and provide regular updates to NYSDPS Staff. Specifically, the Applicant will maintain a Meeting Log (Exhibit C) that will provide specifics on all

meetings, including dates, locations, attendees, purpose, and discussion topics. As previously stated, the Applicant intends to hold at least two open-house style public meetings prior to, and two meetings following, submittal of the PSS. In addition, the Project website will be updated continuously with Project developments, meetings, and announcements to keep stakeholders and the public informed.

5.9 Document Repositories

While all information pertaining to the Project will be updated via the Project website as appropriate, the Applicant proposes to maintain hard copies of the PIP Plan, the PSS, and the Article 10 Application (and any updated subsequent versions of these documents), subject to host ability or capacity, at the following locations for those stakeholders who may not have access to the website, or prefer to review hard copies. Due to current circumstances, document repositories serving this Project are closed at this time. This document will be filed with said repositories as soon as possible:

- Town of Copake Town Hall, 230 Mountain View Rd, Copake, NY 12516
- Roeliff Jansen Community Library, 9091 State Route 22, Hillsdale, NY 12529

Stakeholder participation will be documented by the Applicant through the following activity:

- PIP Plan Meeting Log: The log will document the event date, location, attendees (or category thereof), summary of topics discussed, and any follow-up steps to be taken following the event. The PIP Plan tracking report will be filed with the Secretary to the Board and posted to the Project website on approximately a quarterly basis.

6.0 ENVIRONMENTAL JUSTICE AREAS

The New York State Department of Environmental Conservation (NYSDEC) regulations describe the process for an Article 10 applicant to determine whether a proposed project is likely to impact an environmental justice area, defined as "a minority or low-income community that may bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations" (6 NYCRR § 487.3(l).).

Per NYSDEC Environmental Justice Policy Commissioner Policy (CP)-29, Potential Environmental Justice Areas include census block groups featuring populations that meet or

exceed at least one of the following statistical thresholds:

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

Based on the EPA's Environmental Justice Screening and Mapping Tool (EJSCREEN), there are no Potential Environmental Justice Areas within the Study Area. The nearest Potential Environmental Justice Area to the Project Area is census block group 3, located in the Town of Claverack, over five miles away (53% of the population of this census block group are considered to be low-income). While the Applicant does not expect that the Project will have impacts on any environmental justice areas, the Applicant will voluntarily provide additional information about potential impacts to environmental justice areas in the Preliminary Scoping Statement for the Project, and to comply with the Siting Board's environmental justice regulations throughout the entire Article 10 proceeding for the Project.

7.0 LANGUAGE ACCESS

Per 16 NYCRR § 1000.4(d), the Siting Board's regulations require a PIP Plan to identify: (1) any language other than English spoken by 5,000 or more persons residing in any 5-digit zip code postal zone in which any portion of such zone is located within the Study Area for the Project; and (2) any language other than English spoken by a significant population of persons residing in close proximity to the proposed Project, alternative locations or interconnections.

The Study Area includes a portion of Columbia County. According to the US Census Bureau data from 2010 – 2015, 7% of Columbia County residents age 5 or older speak a language other than English at home (US Census 2017). With a 2015 population estimate of 59,453 persons, this means approximately 3,948 people in the County speak a language other than English at home.

The Study Area contains portions of three 5-digit zip codes. Table 1 summarizes the most prevalent non-English languages spoken in each of these zip codes.

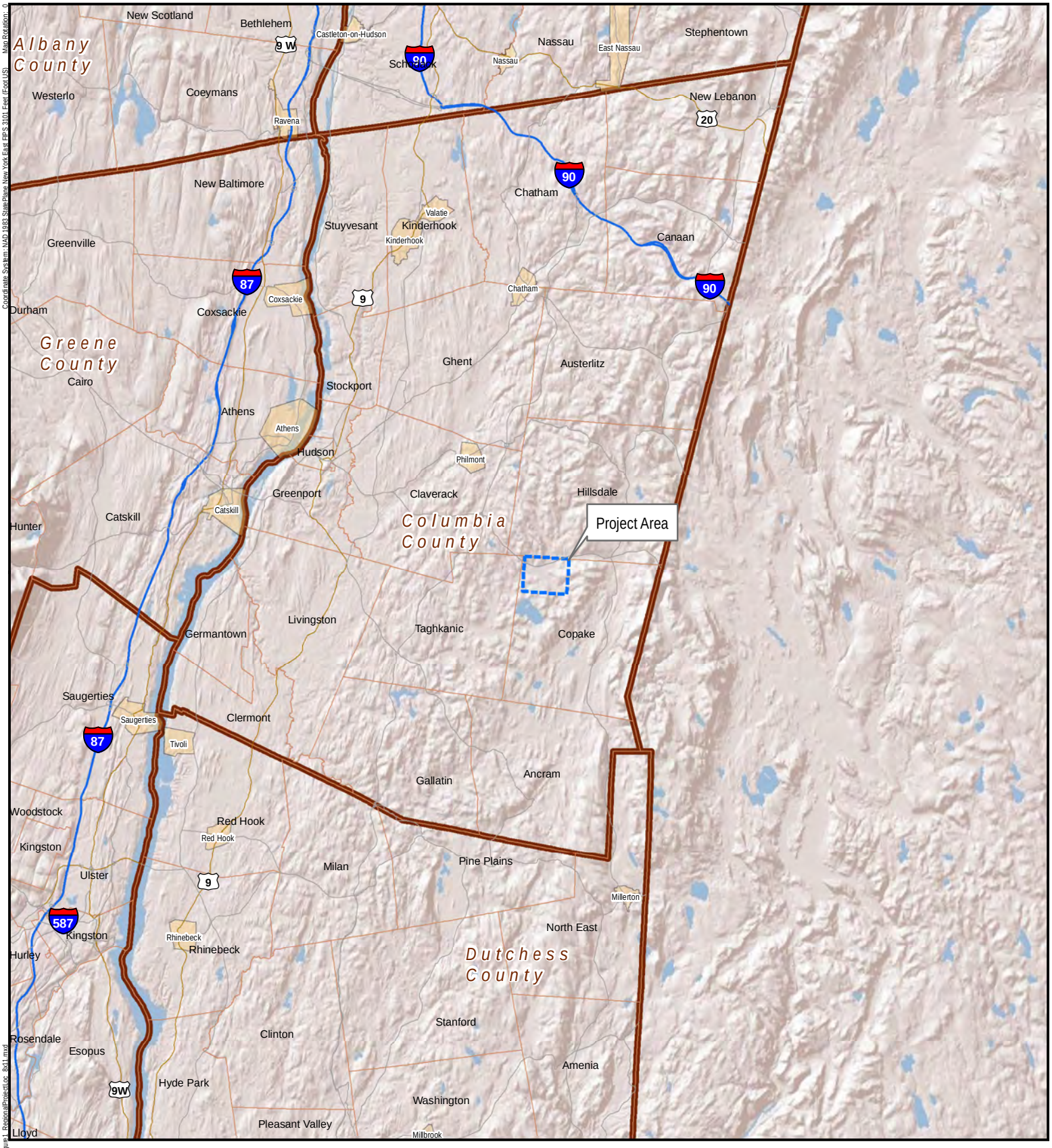
Table 1. Number of Residents of Study Area
Zip Codes who speak a Language Other than English

Zip Code	Post Office	Total Population	Speak Only English	Percentage of Population that speaks only English	Most Prevalent Non- English Language Spoken	
					Language	Number
12516	Copake	1,551	1,390	89.62%	Polish	99
12521	Craryville	1,411	1,316	93.27%	Spanish/Spanish Creole	6
12529	Hillsdale	2,630	2,481	94.33%	Spanish/Spanish Creole	64

Source: 2014-2018 American Community Survey (ACS) 5-Year Estimate, Table ID S1601C16001 Language Spoken at Home for the Population 5 Years and Over

As shown above in Table 1, no language other than English is spoken by more than 5,000 people residing in any zip code within the Study Area. Based on these findings, the Applicant is not proposing to disseminate Project and Article 10-related materials in a second language.

FIGURES



LEGEND

- ROADS
- US HIGHWAY
- INTERSTATE
- PROJECT AREA
- VILLAGE BOUNDARY
- TOWN BOUNDARY
- COUNTY BOUNDARY

N

0 3 6 Miles

1 inch equals 6 miles

1. BASEMAP IMAGERY FROM ESRI ARCGIS "WORLD SHADED RELIEF" MAP SERVICE.

PROJECT:
HECATE - SHEPHERD'S RUN SOLAR
TOWN OF COPAKE
COLUMBIA COUNTY, NY

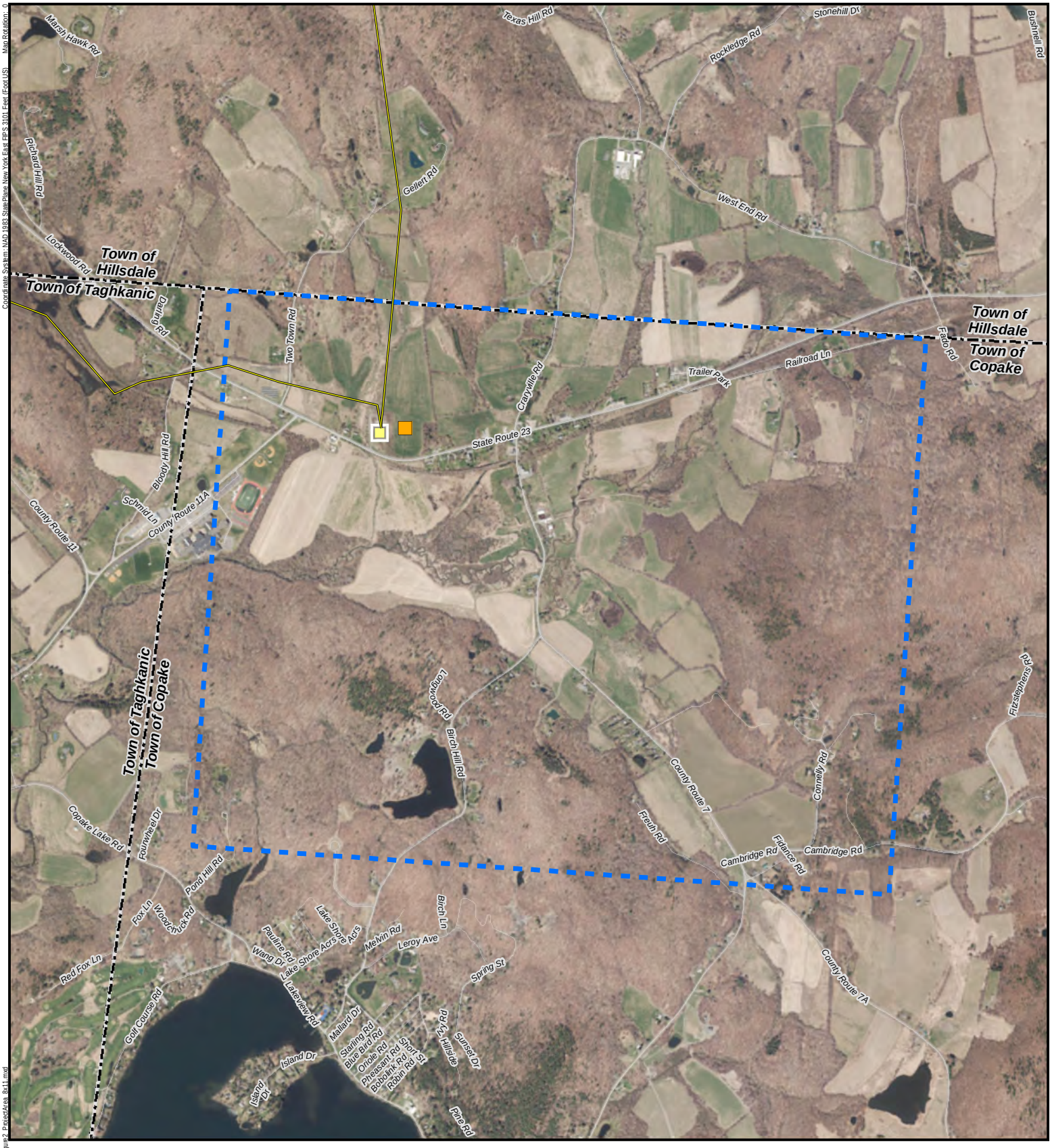
TITLE:
REGIONAL PROJECT LOCATION

DRAWN BY:	A. KAILAS	PROJECT NO.:	364999
CHECKED BY:	E. LAKOMSKI		
APPROVED BY:	H. VAILLANT		**FIGURE 1**
DATE:	JANUARY 2020		

TRC
10 MAXWELL DRIVE
CLIFTON PARK, NY 12065

Hecate Energy

Path: S:\1-PROJECTS\Hecate\365245_Shepherds_Run_Solar\SRS_PIP_Figure1_RegionalProjectLoc_8x11.mxd
Coordinate System: NAD 1983 StatePlane New York East FIPS 3101 Feet (Ftout US) Map Rotation: 0



LEGEND

- EXISTING SUBSTATION LOCATION
- POSSIBLE BATTERY SYSTEM AND SUBSTATION LOCATION
- EXISTING TRANSMISSION LINE
- PROJECT AREA
- TOWN BOUNDARY

Note: No public lands, nor land without private agreement and approval will be used for this project.

1:24,000

1 " = 2,000 '

0 1,000 2,000 Feet

N

1. BASEMAP IMAGERY FROM ESRI "WORLD IMAGERY" MAP SERVICE, 2017.

PROJECT: HECATE - SHEPHERD'S RUN SOLAR
TOWN OF COPAKE
COLUMBIA COUNTY, NY

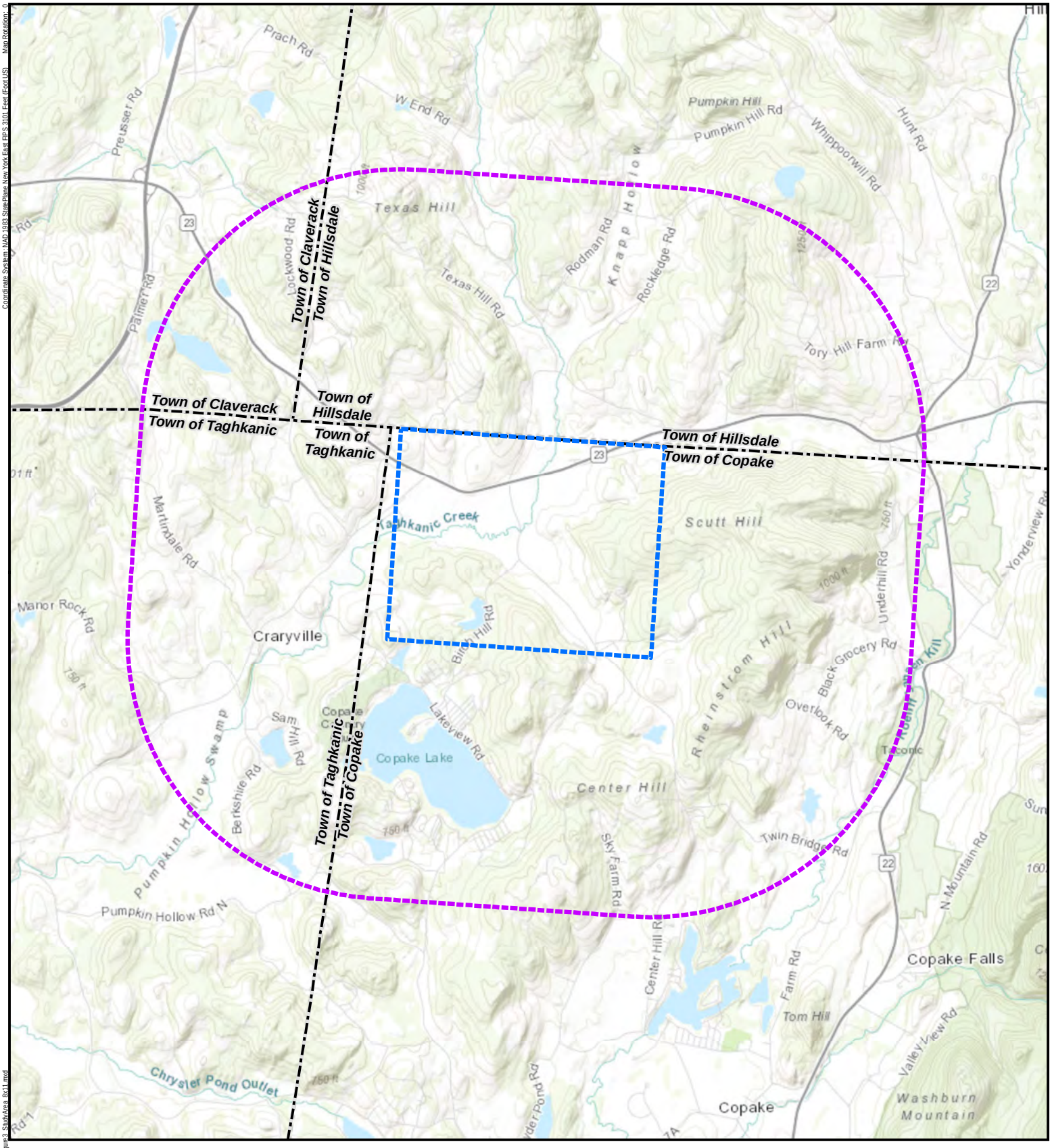
TITLE: **PROJECT AREA**

DRAWN BY:	A. KAILAS	PROJECT NO.:	364999
CHECKED BY:	E. LAKOMSKI		
APPROVED BY:	H. VAILLANT		**FIGURE 2**
DATE:	MARCH 2020		

TRC
10 MAXWELL DRIVE
CLIFTON PARK, NY 12065

Hecate Energy

Path: S:\1-PROJECTS\Hecate\365245_Shepherds_Run_Solar\SRS_PIP_Figure2_ProjectArea_8x11.mxd Coordinate System: NAD 1983 StatePlane New York East FIPS 3101 Feet (Ftcnt US) Map Rotation: 0



NEW YORK OVERVIEW

LEGEND

- PROJECT
- TWO-MILE STUDY AREA
- TOWN BOUNDARY

Note: No public lands, nor land without private agreement and approval will be used for this project.

1:63,360

1 " = 5,280 '

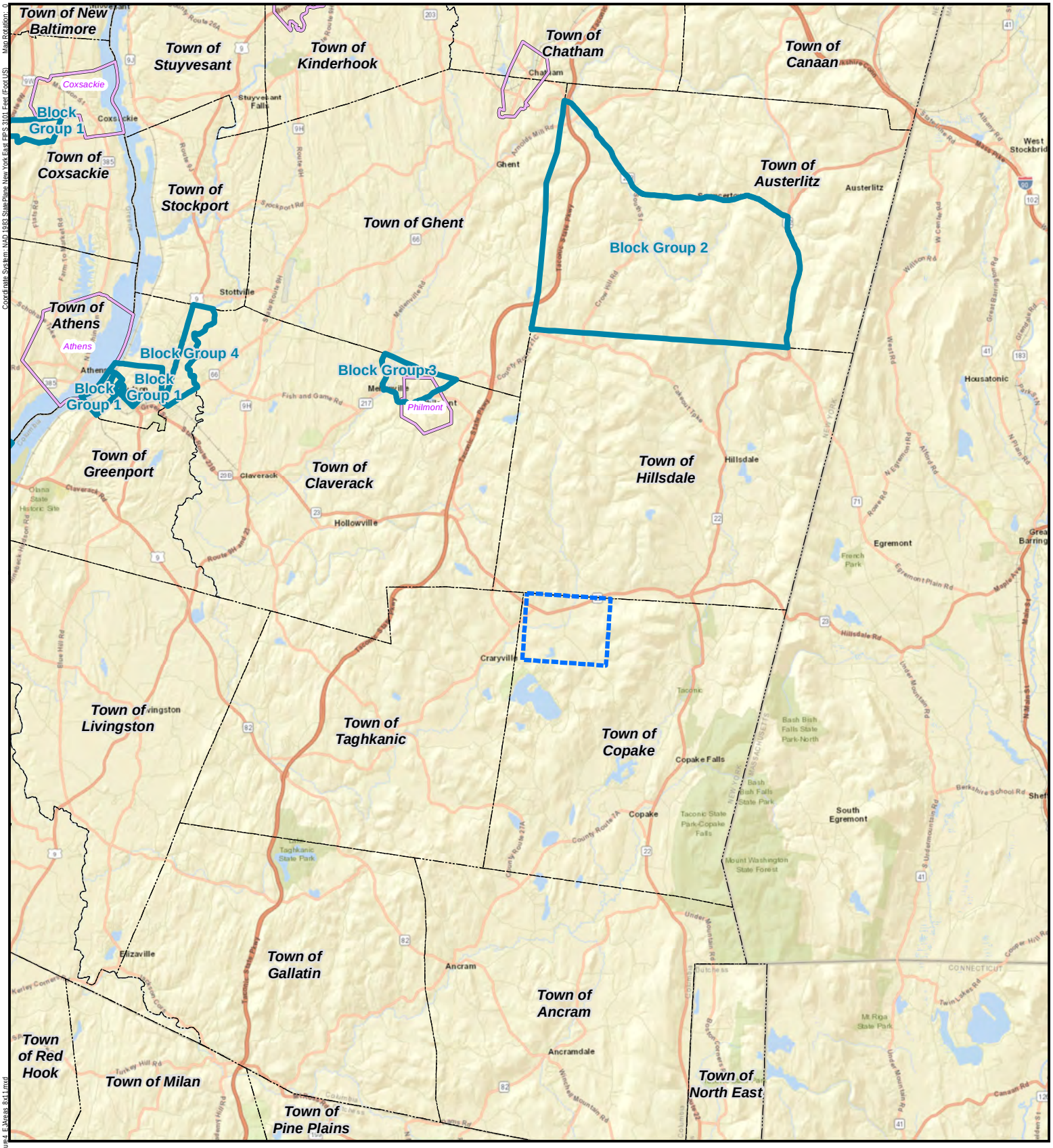
0 0.5 1 Miles

1. BASEMAP IMAGERY FROM ESRI "WORLD TOPOGRAPHIC MAP" MAP SERVICE.

PROJECT:	HECATE - SHEPHERD'S RUN SOLAR TOWN OF COPAKE COLUMBIA COUNTY, NY
TITLE:	**STUDY AREA**
DRAWN BY: A. KAILAS	PROJECT NO.: 364999
CHECKED BY: E. LAKOMSKI	
APPROVED BY: H. VAILLANT	**FIGURE 3**
DATE: JANUARY 2020	

TRC
10 MAXWELL DRIVE
CLIFTON PARK, NY 12065

Hecate Energy



NEW YORK OVERVIEW

LEGEND

- POTENTIAL ENVIRONMENTAL JUSTICE AREA
- PROJECT AREA
- VILLAGE BOUNDARY
- TOWN BOUNDARY

1. BASEMAP IMAGERY FROM ESRI "WORLD STREET MAP" MAP SERVICE.
2. POTENTIAL ENVIRONMENTAL JUSTICE AREAS ARE SHOWN AS IDENTIFIED ON THE USEPA "EJSCREEN" WEBSITE.

1:200,000
1 " = 16,667 '
N
0 1 2 Miles

PROJECT: HECATE - SHEPHERD'S RUN SOLAR
TOWN OF COPAKE
COLUMBIA COUNTY, NY

TITLE: **POTENTIAL ENVIRONMENTAL JUSTICE AREAS**

DRAWN BY:	A. KAILAS	PROJECT NO.:	364999
CHECKED BY:	E. LAKOMSKI		
APPROVED BY:	H. VAILLANT		**FIGURE 4**
DATE:	JANUARY 2020		

TRC
10 MAXWELL DRIVE
CLIFTON PARK, NY 12065

Hecate Energy

Path: S:\1-PROJECTS\Hecate\365245_Shepherds_Run_Solar\SRS_PIP_Figure4_EArcgis_8x11.mxd
Coordinate System: NAD 1983 StatePlane New York East FIPS 3101 Feet (Ftous)
Map Rotation: 0

APPENDICES

Appendix A.
Master Stakeholder List

HOST COMMUNITIES & REPRESENTATIVES

Town of Copake

Jeanne E. Mettler, Town Supervisor
230 Mountain View Road
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Richard Wolf, Deputy Supervisor, Town Councilperson
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Stanley Gansowski, Town Councilperson
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Terry Sullivan, Town Councilperson
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Lynn Connoly, Town Clerk
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Vana S. Hotaling, Deputy Town Clerk
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Lawrence O. Proper, Deputy Town Clerk
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Lee Heim, Code Enforcement Officer
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William H. Gregory Jr., Highway Superintendent
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Copakehighwaydepart@yahoo.com

Robert Haight, Chairperson
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Copakeplanningboard@fairpoint.net

Chris Grant, Deputy Chairperson, Town Planning Board
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Marcia Becker, Planning Board Member
230 Mountain View Road
Copake, NY 12516

Julie Cohen, Planning Board Member
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Copake, NY 12516

Jonathan Urban, Planning Board Member
230 Mountain View Road
Copake, NY 12516

Steve Savarese, Planning Board Member
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Edward Sawchuk, Planning Board Member
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Jon Strom, Chairperson
Town of Copake Zoning Board of Appeals
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Edgar Masters, Agricultural Advisory Committee Member, Conservation Advisory Committee Member
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William Kiernan Jr., Agricultural Advisory Committee Member
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Brian Boom, Conservation Advisory Committee Member
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Copake, NY 12516

Marcia Becker, Conservation Advisory Committee Member
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Copake, NY 12516

Lianna Summers, Parks & Recreation Commission Chairperson
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TownofCopake@fairpoint.net

Mary Ann Carrick, Conservation Advisory Committee Member
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Dan Haas, Conservation Advisory Committee Member
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Chris Quinby, Deputy Chairperson, Parks & Recreation Commission
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Columbia County Agriculture and Farmland Protection Board
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Columbia County Agriculture and Farmland Protection Board
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Lance MacMillan, Region 8 Regional Director
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New York State Energy Research and Development Authority
Richard Kaufmann, Board Chairman
17 Columbia Circle
Albany, NY 12203

New York State Energy Research and Development Authority
Kelly Tyler, Director of Communities and Community Outreach
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New York State Office of Parks, Recreation, and Historic Preservation
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New York State Siting Board
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US Army Corps of Engineers
Steven Metivier, Chief
New York Application Evaluation Section
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Buffalo, NY 14207

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Public Affairs Staff
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STOP 0506
Washington, DC 20250

US Department of Defense, Defense Siting Clearinghouse
Steven Sample
Mission Evaluation Branch
3400 Defense Pentagon
Room 5C646
Washington, DC 20341

US Fish and Wildlife Service
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Cortland, NY 13045

US Department of Agriculture
Rural Development
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Malone, NY 12953

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Syracuse, NY 13261

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SCHOOL DISTRICTS

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Germantown Central School District
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Hudson City School District
Dr. Maria Lagana Suttmeier, Superintendent
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Copake, NY 12516
Tel: (518) 329-0473

Copake Fire District
390 County Rd 7A
Copake, NY 12516

Hillsdale Fire Company
Richard Briggs, Fire Chief
9387 NY-22
Hillsdale, NY 12529

Craryville Fire Company
4210 County Road 7
Craryville, NY 12521
Tel: (518) 325-3665

Craryville Fire District
4210 County Rd 7
Craryville, NY 12521

Copake Community Rescue Squad
283 Mountain View Rd
Copake, New York
Tel: (518) 329-2200

State Police Troop K
3353 Route 9
Hudson, NY 12534

Columbia County Sheriff's Office
David P. Bartlett, Sheriff
Public Safety Facility
85 Industrial Tract
Hudson, NY 12534
Tel: (518) 828-0601

ADJACENT MUNICIPALITIES

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Craig Norton, Zoning Board
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Town of Hillsdale
Veronique Fabio, Planning Secretary
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Town of Claverack

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supervisor@townofclaverack.com

Town of Claverack
Mary Hoose, Town Clerk
PO Box V
Mellenville, NY 12544
hoose@townofclaverack.com

Town of Taghkanic

Town of Taghkanic
Ryan Skoda, Town Supervisor
909 State Route 82
Ancram, NY 12502
skod14@yahoo.com

Town of Taghkanic
Cheryl E. Rogers, Town Clerk
909 State Route 82
Ancram, NY 12502
crogers42857@gmail.com

UTILITIES

New York State Electric and Gas
Carl A. Taylor, President and CEO
NYSEG, PO Box 5224
Binghamton, NY 13902

AIRPORTS

Columbia County Airport
1142 Route 9H
Hudson, NY 12534
8kTel: (518) 828-7011

Copake Lake Seaplane Base
Michael Braunstein, Owner
181 Golf Course Rd
Craryville, NY 12521
Tel: (518) 325-4616

Sky Park Airport
Robert & Leah Brew
267 Kittle Road
Hudson, NY 12534
Tel: 518-828-6149

Great Barrington Airport
70 Egremont Plain Road
Great Barrington, MA 01230
Tel: (413) 528-1010

Klaverack Airport
Sky Park Developers LLC
PO Box 567
Monsey, NY 10952
Tel: 518-828-6149

ADDITIONAL STAKEHOLDERS/PUBLIC INTEREST GROUPS

Cornell Cooperative Extension, Columbia County
Cathi Annese, Board President
6055 Route 23
Acra, New York 12405
columbiagreene@cornell.edu

Copake Iron Works Historic Site
33 Valley View Rd
Copake Falls, NY 12517
Tel: (518) 966-2730

Copake Country Club
44 Golf Course Rd
Craryville, NY 12521

Columbia County Historical Society
Bob Peduzzi, Co-President
Alezandra Anderson, Co-President
5 Albany Avenue
P. O. Box 311
Kinderhook, New York 12106

Roeliff Jansen Historical Society
Lesley Doyel, President
P.O. Box 172
Copake Falls, NY 12517

Taconic State Park
253 NY-344
Copake Falls, NY 12517
Tel: (518) 325-0019

Harlem Valley Rail Trail Association, Inc.
Dick Hermans, Chairman
1 John Street
PO Box 356
Millerton, New York 12546
railtrail@hvrt.org

Pumpkin Hollow Retreat Center
Michael Sellon, President
1184 Co Rd 11
Craryville, NY 12521
Tel: (518) 325-3583

National Grid
P.O. Box 11742
Newark, NJ 07101

Alliance for Clean Energy New York
Anne Reynolds, Executive Director
119 Washington Ave, Suite 1G
Albany, NY 12210
areynolds@aceny.org

New York Power Authority
123 Main Street
Mail Stop 10B
White Plains, NY 10601

The New York Audubon Society
Jillian Liner, President
2 Third Street
Suite 480
Troy, NY 12180
audubon@emailcustomerservice.com

US Department of Agriculture
Sarah Trumbell, Natural Resources
Conservation Service
151 Finney Boulevard
Malone, NY 12953
sarah.trumbull@ny.usda.gov

Sierra Club
Atlantic Chapter
744 Broadway
Albany, NY 12207
Tel: (518) 426-9144

Columbia Land Conservancy
49 Main Street
Chatham, NY 12036
info@clctrust.org

The Wetland Trust
4729 State Route 414
Burdett, NY 14818
Tel: (607) 765-4780

The Nature Conservancy, Capitol Region
195 New Karner Road
Suite 200
Albany, New York 12207
Tel: (518) 690-7850

Scenic Hudson
One Civic Center Plaza, Suite 200
Poughkeepsie, NY 12601
Tel: (845) 473-444

PARTICIPATING LANDOWNERS
To be identified at a later date

ADJACENT LANDOWNERS
To be identified at a later date

AREA RESIDENTS
To be identified at a later date

LOCAL DOCUMENT REPOSITORIES

Town of Copake Town Hall
230 Mountainview Road
Copake, NY 12516
Tel: (518) 329-1234

Roeliff Jansen Community Library
9091 State Route 22
Hillsdale, NY 12529
Tel: (518) 325-4101

Appendix B.
Stakeholder Consultation Goals and Schedule

Name	Goals of Consultation	Schedule
Federal Agencies / Representatives		
US Fish and Wildlife Service	Identify any concerns related to Endangered Species Act, Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act	Consultation letter prior to submittal of the PSS and ongoing throughout Article 10 process
US Army Corps of Engineers	Clarify jurisdiction and requirements under Section 404 and Clean Water Act	Initiate prior to submittal of Article 10 application and ongoing throughout Article 10 process
US Department of Defense	Discuss any navigational issues of concern to military aircraft	Consultation letter prior to submittal of Article 10 application and ongoing throughout Article 10 process (as necessary)
National Telecommunications and Information Administration	Notification as required by Article 10; Discuss any potential communications issues that may impact government communications systems	Initiate prior to submittal of Article 10 application and ongoing throughout Article 10 process
Federal Aviation Administration	Discuss any navigational issues of concern to glint/glare	Consultation letter prior to submittal of Article 10 application and ongoing throughout Article 10 process (as necessary)
US Senator Charles E. Schumer	Notification as required by Article 10	Prior to submittal of Article 10 application and ongoing throughout Article 10 process (as necessary)
US Senator Kirsten E. Gillibrand	Notification as required by Article 10	Prior to submittal of Article 10 application and ongoing throughout Article 10 process (as necessary)

Name	Goals of Consultation	Schedule
US Congressman Antonio Delgado (District 19)	Notification as required by Article 10	Prior to submittal of Article 10 application and ongoing throughout Article 10 process (as necessary)
New York State Agencies / Representatives		
Members of NYS Assembly (Jake Ashby – 107th District and Didi Barrett – 106th District) and NYS Senate (Daphne Jordan – 43rd District)	Introduce Project, Article 10 process, and provide contact information	Introductory letter to be sent prior to PSS
	Notifications and copies of Project Filings as required by Article 10	Prior to submittal of the PSS
	Respond to specific inquiries or comments	As requested by the Stakeholder
NYS Department of Public Service	Introduce the Project and coordinate Article 10 process	Introductory meeting to be held prior to submittal of PSS, to be followed by others as needed. Correspondence anticipated to occur throughout Article 10 process
NYS Department of Environmental Conservation (NYSDEC), Main Headquarter and Region 4 Staff	Introduce Project and provide contact information; notifications and copies of Project Filings as required by Article 10; identify agency concerns related to RTE species, wetlands, and streams	Introductory meeting to be requested prior to submittal of PSS, to be followed by others as needed. Correspondence anticipated to occur throughout Article 10 process
	Additional input of survey plans; feedback on study results	
NYS Office of Parks, Recreation and Historic Preservation (OPRHP)	Coordinate consultation in accordance with Section 14.09 of the New York State Parks, Historic Preservation Law, and/or Section 106 of the Historic Preservation Act, as required	Correspondence and meetings to be requested prior to the Article 10 Application submittal to inform of work plans and contents of cultural studies; ongoing interaction to review findings as necessary throughout Article 10 process

Name	Goals of Consultation	Schedule
NYS Department of Health	Notifications and copies of Project Filings as required by Article 10	Prior to submittal of the Article 10 Application and ongoing throughout Article 10 process (as necessary)
NYS Department of Transportation	Notifications and copies of Project Filings as required by Article 10	Prior to submittal of the Article 10 application and ongoing throughout Article 10 process (as necessary)
NYS Energy Research and Development Authority	Notifications and copies of Project Filings as required by Article 10	Prior to submittal of the Article 10 Application and ongoing throughout Article 10 process (as necessary)
NYS Division of Homeland Security and Emergency Services	Notifications and copies of Project Filings as required by Article 10	Prior to submittal of the Article 10 application and ongoing throughout Article 10 process (as necessary)
NYS Department of State	Notifications and copies of Project Filings as required by Article 10	Prior to submittal of the Article 10 Application and ongoing throughout Article 10 process (as necessary)
NYS Department of Ag & Markets	Notifications and copies of Project Filings as required by Article 10; Introduce Project including contact information; discuss areas of interest and identify agency	Introductory meeting to be requested prior to submittal of PSS; consultation anticipated to occur throughout Article 10 process (as necessary)
NYS Attorney General	Notifications and copies of Project Filings as required by Article 10	Prior to submittal of the Article 10 Application
New York Independent System Operator	Participation in interconnection process	Interconnection filings to be submitted prior to submittal of the Article 10 Application
NYS Thruway Authority	Notifications and copies of Project Filings as required by Article 10	Prior to submittal of the Article 10 application
Empire State Development Corporation	Notifications and copies of Project Filings as required by Article 10	Prior to submittal of the Article 10 application

Name	Goals of Consultation	Schedule
Host County		
Columbia County Board of Supervisors (Matt B. Murell, Chairman)	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS; additional consultation anticipated to occur throughout the Article 10 process (as necessary)
Columbia County Soil & Water Conservation District (Laura Sager, Executive Director)	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS; additional consultation anticipated to occur throughout the Article 10 process (as necessary)
Columbia County Dept. of Planning (Patrice Perry, Director)	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS; additional consultation anticipated to occur throughout the Article 10 process (as necessary)
Columbia County Highway Division (Anthony DeMarco, Superintendent)	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS; additional consultation anticipated to occur throughout the Article 10 process (as necessary)
Columbia County Economic Development Corporation (Mr. F. Michael Tucker CEO/President)	Discuss the payment in lieu of taxes structure	Notification prior to submittal of the PSS

Name	Goals of Consultation	Schedule
Columbia County Agriculture and Farmland Protection Board (Jim Waterhouse and Jim Davenport, Co-Chairmen)	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS; additional consultation anticipated to occur throughout the Article 10 process (as necessary)
Columbia County Clerk (Holly Tanner)	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS; additional consultation anticipated to occur throughout the Article 10 process (as necessary)
Columbia County Fire Coordinator (George Keeler, Director)	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS; additional consultation anticipated to occur throughout the Article 10 process (as necessary)
Columbia County Real Property Tax Department (Suzette Booy, Director)	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS; additional consultation anticipated to occur throughout the Article 10 process (as necessary)
Columbia County Public Health Department (Jack Mabb, Director of Public Health)	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS; additional consultation anticipated to occur throughout the Article 10 process (as necessary)

Name	Goals of Consultation	Schedule
Columbia County Tourism Department (Ann Cooper, Administrator)	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS; additional consultation anticipated to occur throughout the Article 10 process (as necessary)
Columbia County Facilities Division (Brian McDonald, Director)	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS; additional consultation anticipated to occur throughout the Article 10 process (as necessary)
Host Municipalities		
Town of Copake		
Town Supervisor (Jeanne Mettler)	Introduce the Applicant and the Project, Article 10 process, intervenor funding and provide contact information; Discuss Project related areas of interest or concern if requested	Introductory meeting to be requested prior to submittal of PSS and throughout the Article 10 process (as necessary)
Town Clerk (Lynn Connoly)	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
Town Planning Board (Robert Haight, Chairperson)	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)

Name	Goals of Consultation	Schedule
Town Highway Department Superintendent (William Gregory Jr.)	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
Airports		
Columbia County Airport	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
Great Barrington Airport	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
Copake Lake Seaplane Base	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
Sky Park Airport	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)

Name	Goals of Consultation	Schedule
Klaverack Airport	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
School Districts		
Taconic Hills Central School District Dr. Neil Howard, Superintendent	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
Germantown Central School District Susan L.S. Brown, Superintendent	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
Hudson City School District Dr. Maria Lagana Suttmeier, Superintendent	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
Chambers of Commerce		
Columbia County Chamber of Commerce	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)

Name	Goals of Consultation	Schedule
Emergency Responders		
Columbia County Sheriff's Office	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern, if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
Copake Fire Department	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
Craryville Fire District	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
Hillsdale Fire Company	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern, if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
Columbia County Emergency Management	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
Columbia County Emergency Medical Services (P.J. Keeler, EMS Coordinator)	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS; additional consultation anticipated to occur throughout the Article 10 process (as necessary)

Name	Goals of Consultation	Schedule
Columbia County Fire Coordinator (George Keeler, Director)	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS; additional consultation anticipated to occur throughout the Article 10 process (as necessary)
New York State Police, Troop K	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
NYS Division of Homeland Security and Emergency Services	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
Adjacent Municipalities		
Town of Hillsdale	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
Town of Claverack	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)

Name	Goals of Consultation	Schedule
Town of Taghkanic	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
Additional Stakeholders/Public Interest Groups		
Participating Landowners	Landowner agreements	Correspondence by phone, mail or in-person meeting per Article 10 regulations and as needed
Adjacent Landowners	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
Area Residents	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to PSS submittal of the PSS and ongoing throughout Article 10 process (as necessary)
USDA Farm Service Agency	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
USDA Natural Resources Conservation Service	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)

Name	Goals of Consultation	Schedule
Copake Iron Works Historic Site	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
Copake Country Club	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
Roeliff Jansen Historical Society	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
Cornell Cooperative Extension, Columbia County	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
Columbia County Historical Society	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
New York State Electric and Gas	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout NYISO interconnection process.

Name	Goals of Consultation	Schedule
The New York Audubon Society	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
The Nature Conservancy	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
The Wetland Trust	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
Sierra Club	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
Copake Seaplane Base	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
Taconic State Park	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)

Name	Goals of Consultation	Schedule
Harlem Valley Rail Trail Association, Inc.	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
Pumpkin Hollow Retreat Center	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
National Grid	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
Alliance for Clean Energy New York	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
New York Power Authority	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
Columbia Land Conservancy	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)

Name	Goals of Consultation	Schedule
Scenic Hudson	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
Document Repositories		
Town of Copake Town Hall	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)
Roeliff Jansen Community Library	Notification to introduce Project, Article 10 process, intervenor funding and provide contact information. Follow-up to discuss Project related areas of interest or concern if requested	Notification prior to submittal of the PSS and ongoing throughout Article 10 process (as necessary)

Appendix C.
Shepherd's Run Solar Project PIP Plan Meeting Log

Stakeholder	Date	Location	Attendees	Purpose	Follow-Up Action Items	Comments
Scenic Hudson	01/07/20	Phone	Gabe Wapner, Audrey Friedrichsen	Gabe requested a meeting to provide and update on the Project.	Set up meeting.	
Jeanne Mettler	01/09/20	Email	Jim McGowan, Alex Campbell, Phil Wellner	Sent email and covering letter to Jeanne Mettler regarding the Project.	Set up meeting to introduce team and Project with Town Board members.	
Harlem Valley Rail Trail	01/16/20	Email and Phone	Alex Campbell, Lisa DeLeeuw	Alex discussed the Project with Lisa and introduced Hecate. Lisa offered support.	Hecate team will keep Lisa updated on the Project's progress.	
Jeanne Mettler	01/20/20	Email	Phil Wellner	Follow-up on January 9, 2020 email and covering letter.	Set up meeting to introduce team and Project with Town Board members.	
Audubon Society	01/21/20	Phone (and message)	Alex Campbell and main line phone for Audubon Society	Alex called to introduce the Project and Hecate to Audubon Society.	Call again.	
Scenic Hudson (SH) and Columbia Land Conservancy (CLC)	01/23/20	In person meeting in Chatham, NY	Peter Paden (CLC), Audrey Friedrichsen (SH), Hayley Carlock (SH), Christine Vanderland (CLC), other members of CLC and SH, Jim McGowan (Hecate), Gabe Wapner (Hecate), Alex Campbell (Hecate)	Introduce Project.	Send PowerPoint presentation discussed. Share key benefits of Project.	

Stakeholder	Date	Location	Attendees	Purpose	Follow-Up Action Items	Comments
Town Board Members	01/23/20	Town Hall - Copake	Jeanne Mettler, Richard Wolf, Robert Haight, Jim McGowan, Gabe Wapner, Alex Campbell	Introduce Project to Town and Planning Boards.	Send PowerPoint presentation discussed. Share key benefits of Project.	
Jeanne Mettler	01/28/20	Email	Jeanne Mettler, Alex Campbell CLC, Gabe Wapner, Jim McGowan	Introduce Jeanne to NYSERDA, CLC, and SH with their respective contacts.	Send an email to NYSERDA, Scenic Hudson, CLC to introduce Jeanne, per Jeanne request.	
Jeanne Mettler	02/03/20	Email	Jeanne Mettler, Alex Campbell	Notified Jeanne of our press release issued to Register Star and Columbia Paper.	n/a	
Anne Reynolds	02/03/20	Email	Anne Reynolds (ACE), Alex Campbell	Notified Anne of our press release issued to Register Star and Columbia Paper.	n/a	
Diane Valden	02/03/20	Phone Call	Diane Valden (the Columbia Paper), Alex Campbell	Diane interviewed Alex regarding the press release on the project for an article to be published on February 6, 2020.	Send Diane Article 10 link.	
Abby Hoover	02/04/20	Phone Call	Abby Hoover (the Register Star), Alex Campbell	Abby interviewed Alex regarding the press release on the Project.	n/a	

Stakeholder	Date	Location	Attendees	Purpose	Follow-Up Action Items	Comments
Peter Cipkowski	02/05/20	Email	Peter, Alex Campbell, Jim McGowan, Gabe Wapner, Phil Wellner	Email with attached press release noting Columbia Paper will issue an article about the Project on February 6, 2020 and general introduction.	n/a	
Mr. Baker (Craryville FD)	02/05/20	Email	Mr. Baker, Alex Campbell, Jim McGowan, Gabe Wapner, Phil Wellner	Email with attached press release noting Columbia Paper will issue an article about the Project on February 6, 2020 and general introduction.	n/a	
Dr. Neil Howard (Taconic Hills Superintendent)	02/05/20	Email	Dr. Howard, Alex Campbell, Jim McGowan, Gabe Wapner, Phil Wellner	Email with attached press release noting Columbia Paper will issue an article about the Project on February 6, 2020 and general introduction.	n/a	
Jeanne Mettler	02/10/20	Email	Jeanne, Jim McGowan, Alex Campbell, Gabe Wapner	Forwarded copy of the Project PIP Plan to Supervisor Mettler as requested.	n/a	
Peter Cipkowski	02/13/20	In person meeting (Hillsdale)	Peter Cipkowski, Phil Wellner, Jim McGowan	Project introduction meeting with Hillsdale Town Supervisor, Peter Cipkowshi.	n/a	
Copake Town Board meeting	02/13/20	In person (Copake)	Jim McGowan, Copake Town Board and public.	Observe discussions regarding Project and other Town issues.	n/a	

Stakeholder	Date	Location	Attendees	Purpose	Follow-Up Action Items	Comments
Texas Contractor	02/19/20	Phone Call	Jim McGowan and Texas Contractor	Discussed civil work scope during the construction and approximate RFP date.	n/a	
Save Craryville	02/21/20	Phone Call	Jim McGowan and Jamie Carano	Provided information regarding the Project and how to include Save Craryville on the Project notification list.	Add Save Craryville to the notification list in the PIP Plan.	
Mathew DeRussio	02/26/20	Phone Call	Jim McGowan and Matt DeRussio	Provided information regarding the Project location.	n/a	
Jeanne Mettler	03/06/20	Email	Jeanne Mettler, Richard Wolf, Alex Campbell, Jim McGowan, Gabe Wapner	Notification email to Town that Article 23 was recently introduced and that Hecate was unaware how it could potentially affect the Project.	n/a	
Richard Wolf	03/11/20	Phone Call	Alex Campbell and Richard Wolf	Discussed the upcoming Town Board Resolution.	n/a	
Mr. Bill Baker (Craryville FD)	03/12/20	In person meeting (Hillsdale)	Alex Campbell, Bill Baker, Dell (Craryville FD), and Phil Wellner	Discussed the Project and how the Project will interact with the local FD and what the FD wants from the Project.	Keep Mr. Baker updated and inform him on 1) access 2) emergency shut off procedures and 3) who to contact.	
Save Craryville	03/12/20	Phone Call	Alex Campbell and Jamie Carano	Discussed Project schedule and Siting Board local representative selection process.	Send Jamie a generic Article 10 schedule process.	

Stakeholder	Date	Location	Attendees	Purpose	Follow-Up Action Items	Comments
Richard McCormack	03/19/20	Phone Call	Alex Campbell and Richard McCormack	Discussed the Project and habitat impact.	Email Richard Alex's contact.	
Nora Mishanec	03/24/20	Email	Alex Campbell and Nore Mishanec	Set up time to discuss Project updates.	Nora to revert with timing that works for her and Abby Hoover of Columbia Green Media.	
Peter Cipkowski	03/27/20	Email	Jim McGowan and Peter Cipkowski	Requested from Hillsdale Town Supervisor Peter Cipkowski the names of additional town officials to add to the Master Stakeholder List	Add the names of the additional Hillsdale stakeholders once received.	

Appendix D.
Shepherd's Run Solar Project Preliminary Project Schedule

**Please note – all dates are estimated and subject to change; notification of major project milestones and public participation opportunities will be provided as information is available.*

Q1 2020 – File Preliminary Public Involvement Program Plan with NYSDPS

Late Q1 2020 – File Final Public Involvement Program Plan with NYSDPS

Q2 2020 – Public Open House Informational Meeting; Public to be notified of specific date/location prior to meeting

Q2/Q3 2020 – File Preliminary Scoping Statement

Q3 2020 – File Article 10 Application

Q4 2021 – Siting Board Decision on Issuance of Article 10 Certificate

Q3 2022 – Commercial Operation Date

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Via Electronic Mail

June 4, 2020

Honorable Michelle L. Phillips
Secretary
New York State Board on Electric Generation Siting
and the Environment
Empire State Plaza
Agency Building 3
Albany, NY 12223-1350

Re: Case 20-F-0048 – Application of Hecate Energy Columbia County 1 LLC for a Certificate of Environmental Compatibility and Public Need Pursuant to Article 10 of the Public Service Law for Construction of a Solar Electric Generating Facility Located in the Town of Copake, Columbia County.

Dear Secretary Phillips:

Please find attached for filing in the above-captioned proceeding a supplement to the April 2, 2020 Shepherd's Run Revised Public Involvement Program Plan.

Respectfully submitted,

READ AND LANIADO, LLP
Attorneys for Hecate Energy Columbia 1, LLC

By: /s/
Tyler W. Wolcott

Attachment

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June 4, 2020

Honorable Michelle L. Phillips
Secretary
New York State Board on Electric Generation Siting
and the Environment
Empire State Plaza
Agency Building 3
Albany, NY 12223-1350

Re: Case 20-F-0048 – Application of Hecate Energy Columbia County 1 LLC for a Certificate of Environmental Compatibility and Public Need Pursuant to Article 10 of the Public Service Law for Construction of a Solar Electric Generating Facility Located in the Town of Copake, Columbia County.

Dear Secretary Phillips:

With this letter, Hecate Energy Columbia County 1 LLC ("Hecate Columbia") hereby supplements its Revised Public Involvement Program ("PIP") Plan for the Shepherd's Run solar facility (the "Project") filed in the above-captioned proceeding on April 2, 2020. The PIP Plan provided, inter alia, that two open houses would be held on the same day at different times prior to submittal of the Project's Preliminary Scoping Statement ("PSS"). Considering the current restrictions on public gatherings resulting from the COVID-19 pandemic, and the health and safety of potential attendees, it is not possible or prudent to hold the in-person open houses that Hecate Columbia originally planned. Hecate Columbia has discussed its proposed alternative with Department of Public Service ("DPS") Staff, and will implement the following alternative to the pre-PSS open houses.

To solicit further input from the public, Hecate Columbia will mail a postcard to the public within 2.5 miles of the Project Area boundary (the "Distribution Area"). Hecate Columbia is extending the radius for this mailing from 2 miles due to the unique circumstances. The postcard will provide information on how to access an informational packet that will include the materials that would have been presented at the open houses. The informational packet will be available at the Project's website, which will be provided on the postcard.

Hecate Columbia is an environmentally conscious company and prefers to distribute the informational packet electronically as much as possible. But, the postcard will include information on how anyone can request that a hard copy of the informational packet be sent to them via the Project's toll-free telephone number or email. Hecate Columbia will also work with the Town of Copake to choose a public area where a limited number of hard copies will be delivered and offered if members of the public wish to pick up a copy themselves. Hecate Columbia will use the money saved by not printing hard copies for the entire Distribution Area to provide a donation to a local charitable fund or organization.

The postcard and informational packet will also invite comments and questions about the Project from the public within at least a 10-day period via the Project's website, email, or toll-free telephone number. After the conclusion of the comment period, Hecate Columbia will post relevant comments received and Hecate Columbia's responses to the Project's website and on the DPS DMM website for the Project. This will be an anonymous process; the identity of the commenters will not be revealed in these materials. Once the public document repositories are reopened, the response document will also be sent to those facilities. The informational packet will describe the comment process.

Respectfully submitted,

READ AND LANIADO, LLP
Attorneys for Hecate Energy Columbia 1, LLC

By: /s/
Tyler W. Wolcott

APPENDIX D.

STAKEHOLDER LIST

Appendix D.
Master Stakeholder List

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Town of Copake Zoning Board of Appeals
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Airmont, NY 10952

300 Saddle River Rd
Airmont, NY 10952

300 Saddle River Rd
Airmont, NY 10952

300 Saddle River Rd
Airmont, NY 10952

109 Two Town Rd
Craryville, NY 12521

457 Craryville Rd
Hillsdale, NY 12529

P.O. Box 530255
Atlanta, GA 30353

P.O. Box 530255
Atlanta, GA 30353

76 Fisher Ave
Tuckahoe, NY 10707

1017 Minor Ave Apt 301
Seattle, WA 98104

601 Fairwinds Dr
Nokomis, FL 34275

124 Anthony St
Hillsdale, NY 12529

441 Craryville Rd
Hillsdale, NY 12529

2 Lockwood Rd
Craryville, NY 12521

435 Craryville Rd
Hillsdale, NY 12529

109 Two Town Rd
Craryville, NY 12521

7 Indian River Ave Apt 1202
Titusville, FL 32796

44 West End Rd
Hillsdale, NY 12529

91 Two Town Rd
Craryville, NY 12521

91 Two Town Rd
Craryville, NY 12521

West Hillsdale
Hillsdale, NY 12529

17 Preusser Rd
Craryville, NY 12521

405 Craryville Rd
Hillsdale, NY 12529

97 Roxbury Rd
Hudson, NY 12534

500 W 43rd St Apt 30D
New York, NY 10036

413 Craryville Rd
Hillsdale, NY 12529

750 Driggs Ave Apt 8
Brooklyn, NY 11211

1362 Route 11
Craryville, NY 12521

4 Kingston Dr
Spring Valley, NY 10977

193 Bryan's Rd
Hampton, NJ 08827

24 Van Wyck Ln
Lloyd Harbor, NY 11743

P.O. Box 530255
Atlanta, GA 30353

122 West End Rd
Hillsdale, NY 12529

140 West 4th St Apt 17
New York, NY 10012

300 Saddle River Rd
Airmont, NY 10952

4 Adams Hill Rd
Cross River, NY 10518

Agency Bldg 1, EPS
Albany, NY 12238

P.O. Box 530255
Atlanta, GA 30353

320 River Ave
Patchogue, NY 11772

172 West End Rd
Hillsdale, NY 12529

117 E 57th St Apt 32-F
New York, NY 10022

1029 County Route 7A
Hillsdale, NY 12529

90-02 153rd Ave
Howard Beach, NY 11414

P.O. Box 530255
Atlanta, GA 30353

97 Roxbury Rd
Hudson, NY 12534

80 Connelly Rd
Hillsdale, NY 12529

P.O. Box 530255
Atlanta, GA 30353

601 Fair Winds Dr
Nokomis, FL 34275

315 Central Park West Apt 6W
New York, NY 10025

750 Driggs Ave Apt 8
Brooklyn, NY 11211

413 Craryville Rd
Hillsdale, NY 12529

Agency Bldg 1, ESP
Albany, NY 12238

97 Roxbury Rd
Hudson, NY 12534

97 Roxbury Rd
Hudson, NY 12534

P.O. Box 522
Millerton, NY 12546

P.O. Box 473
Craryville, NY 12521

944 Spring Ave
Troy, NY 12180

Agency Bldg 1, ESP
Albany, NY 12238

124 Anthony St
Hillsdale, NY 12529

47 Freuh Rd
Hillsdale, NY 12529

47 Freuh Rd
Hillsdale, NY 12529

176 E 77th St Apt 16-F
New York, NY 10075

145 Norman Ave
Brooklyn, NY 11222

3551 County Route 7
Hillsdale, NY 12529

1198 County Route 7A
Hillsdale, NY 12529

76 Fisher Ave
Tuckahoe, NY 10707

76 Fisher Ave
Tuckahoe, NY 10707

97 Roxbury Rd
Hudson, NY 12534

P.O Box 65
Craryville, NY 12521

76 Fisher Ave
Tuckahoe, NY 10707

P.O. Box 361
Red Hook, NY 12571

1684 County Route 11
Craryville, NY 12521

37 Two Town Rd
Craryville, NY 12521

17 Wantage School Rd
Sussex, NJ 07461

37 Two Town Rd
Craryville, NY 12521

40 Two Town Rd
Craryville, NY 12521

219 N 12th St
Newark, NJ 07107

4 Kingston Dr
Spring Valley, NY 10977

4 Adams Hills Rd
Cross River, NY 10518

1409
Brooklyn, NY 11247

2 Main St
Chatham, NY 12037

193 Bryans Rd
Hampton, NJ 08827

90 Railroad Ln
Craryville, NY 12521

315 Central Park West Apt 6W
New York, NY 10025

P.O Box 213
New Vernon, NJ 07076

444 Washington St
Rensselaer, NY 12144

193 Bryan's Rd
Hampton, NJ 08827

36 Prescott Ave
White Plains, NY 10605

P.O. Box 2006
Kent, CT 06757

1564 State Route 23
Craryville, NY 12521

97 Roxbury Rd
Hudson, NY 12534

24 Bridlewood Rd
Northbrook, IL 60062

97 Roxbury Rd
Hudson, NY 12534

346 Craryville Rd
Hillsdale, NY 12529

601 Fair Winds Dr
Nokomis, FL 34275

54 Railroad Ln
Craryville, NY 12521

P.O. Box 73
Craryville, NY 12521

159 Maujer St 2
Brooklyn, NY 11206

247 Texas Hill Rd
Hillsdale, NY 12529

One City Ctr Fl 5th
Portland, ME 04101

54 Railroad Ln
Craryville, NY 12521

210 Bull Path
East Hampton, NY 11937

P.O. Box 26
Craryville, NY 12521

1100 Park Ave
New York, NY 10128

1865 Rte 23
Craryville, NY 12521

P.O. Box 325
Craryville, NY 12521

P.O. Box 25
Craryville, NY 12521

86 Fremont St
Harrison, NY 10528

3250 Chapel Creek Cir
Welsely Chapel, FL 33544

One City Ctr
Portland, ME 04101

1817 Route 23
Craryville, NY 12521

P.O. Box 405
Craryville, NY 12521

P.O. Box 405
Craryville, NY 12521

22 West End Rd
Hillsdale, NY 12529

1820 State Rte. 23
Craryville, NY 12521

97 Roxbury Rd
Hudson, NY 12534

P.O. Box 183
Craryville, NY 12521

17602 Fosgate Rd
Montverde, FL 34756

P.O. Box 196
Craryville, NY 12521

9257 SE Mystic Cove Ter
Hobe Sound, FL 33455

97 Roxbury Rd
Hudson, NY 12534

P.O. Box 217
Craryville, NY 12521

3610 Pleasant Ridge Rd
Wingdale, NY 12594

173 Whippoorwill Rd
Hillsdale, NY 12529

1668 County Route 11
Craryville, NY 12521

97 Roxbury Rd
Hudson, NY 12534

1076 RTE. 82
Ancram, NY 12502

2 Taconic St
Copake, NY 12516

4226 County Route 7
Craryville, NY 12521

521 Hall Hill Rd
Ancram, NY 12502

37 Twotown Rd
Craryville, NY 12521

540 Gahbauer Rd
Hudson, NY 12534

P.O. Box 363
Craryville, NY 12521

128 E Penn St
Long Beach, NY 11561

RR1 Box 294 W Cornwall Rd
Sharon, CT 06069

159 Maujer St 2
Brooklyn, NY 11206

1730 State Route 23
Craryville, NY 12521

1111 W College Pkwy Apt 202
Carson City, NV 89703

P.O. Box 314
Craryville, NY 12321

P.O. Box 173
Craryville, NY 12521

193 Bryan's Rd
Hampton, NJ 08827

193 Bryan's Rd
Hampton, NJ 08827

215 Congress St
Brooklyn, NY 11201

97 Roxbury Rd
Hudson, NY 12534

4160 County Route 7
Craryville, NY 12521

4160 County Route 7
Craryville, NY 12521

193 Bryans Rd
Hampton, NJ 08827

97 Roxbury Rd
Hudson, NY 12534

1248 County Route 7A
Hillsdale, NY 12529

1410 Broadway Fl 23
New York, NY 10018

97 Roxbury Rd
Hudson, NY 12534

4 Bayberry Hill
Mahopac, NY 10541

233 Beach 119th St
Rockaway Park, NY 11694

2440 Stevens Ave Apt 1
Minneapolis, MN 55404

259 Cambridge Rd
Hillsdale, NY 12529

314 Hardwood Ct Ste 310
Scarsdale, NY 10503

711 San Anselmo Ave
San Anselmo, CA 94960

4 Bayberry Hill
Mahopac, NY 10541

97 Roxbury Rd
Hudson, NY 12534

7 Birch Hill Rd. Rd
Craryville, NY 12521

P.O. Box 24
Craryville, NY 12521

220 Riverside Blvd Apt 19N
New York, NY 10069

1779 Second Ave
New York, NY 10128

P.O. Box 204
Craryville, NY 12521

25 Birch Hill Rd
Craryville, NY 12321

99 Riverview Ave
Tarrytown, NY 10591

14 Burr Rd
West Port, CT 06880

2903 Valentine Ave Apt 11C
Bronx, NY 10458

32 Underhill Rd
Hillsdale, NY 12529

206 Sackett St Apt 4
Brooklyn, NY 11231

39 Birch Hill Rd
Copake, NY 12516

P.O. Box 31
Craryville, NY 12521

4 Bayberry Hill Rd
Mahopac, NY 10541

112 W Houston St Apt 4-B
New York, NY 10012

79 Birchhill Rd
Craryville, NY 12521

11 Riverside Dr Apt 7-WE
New York, NY 10023

Breezy Hill Rd
Copake Falls, NY 12517

P.O. Box 98
Philmont, NY 12565

P.O. Box 577
Amenia, NY 12501

P.O. Box 346
West Stockbridge, MA 01266

223 Cambridge Rd
Hillsdale, NY 12529

4029 County Route 7
Craryville, NY 12521

4025 Rte 7
Craryville, NY 12521

24 Parkview Ct
White Plains, NY 10603

4019 County Route 7
Craryville, NY 12521

420 E 55th St Apt 7-K
New York, NY 10022

4015 County Route 7
Craryville, NY 12521

4011 County Route 7
Craryville, NY 12521

P.O. Box 326
Craryville, NY 12521

247 Texas Hill Rd
Hillsdale, NY 12529

141 4th St
Hicksville, NY 11801

4003 County Route 7
Craryville, NY 12521

84 Connelly Rd Stop #53
Hillsdale, NY 12529

600 W 115th St Apt 73
New York, NY 10025

3999 County Route 7
Craryville, NY 12521

70 Connelly Rd
Hillsdale, NY 12529

223 Cambridge Rd
Hillsdale, NY 12529

5854 Beverly Dr
Hudson, FL 34667

610 W 42nd St Apt 26-K
New York, NY 10036

70 Connelly Rd
Hillsdale, NY 12529

97 Brimstone Rd
Patterson, NY 12563

811 Walton Rd
Broad Channel, NY 11693

501 W 123rd St Apt 4F
New York, NY 10027

52 Connelly Rd
Hillsdale, NJ 12529

501 W 123rd St Apt 4F
New York, NY 10027

22329 Cortez Blvd
Brooksville, FL 34601

34 Pond Hill Rd
Craryville, NY 12521

17 Carleton Ave
Briarcliff, NY 10510

129 Birch Hill Rd
Hillsdale, NY 12521

14 Lime Rock Ln
Califon, NJ 07830

14 Lime Rock Ln
Califon, NJ 07830

28 Connelly Rd
Hillsdale, NY 12529

100 Cambridge Rd
Hillsdale, NY 12529

23 Park Circle
Great Neck, NY 11204

67 Cambridge Rd
Hillsdale, NY 12529

551 Miller Rd 2
Hudson, NY 12534

100 Cambridge Rd
Hillsdale, NY 12529

202 Capen Blvd
Amherst, NY 14226

202 Capen Blvd
Amherst, NY 14226

1248 County Route 7A
Hillsdale, NY 12529

30 Cambridge Rd
Hillsdale, NY 12529

6 Brentwood Ct
Mt. Kisco, NY 10529

803 Virginia Ave
N Bellmore, NY 11710

420 E 55th St Apt 7-K
New York, NY 10022

3130 30th St Apt C2
Astoria, NY 11106

1248 County Route 7A
Hillsdale, NY 12529

1230 Center Hill Rd
Hillsdale, NY 12529

P.O. Box 346
West Stockbridge, MA 01266

1224 Center Hill Rd
Hillsdale, NY 12529

3609 County Route 7
Hillsdale, NY 12529

3619 County Route 7
Hillsdale, NY 12529

1180 County Route 7-A
Hillsdale, NY 12529

P.O. Box 216
Hillsdale, NY 12529

17 Carleton Ave
Briarcliff, NY 10510

17 Carleton Ave
Briarcliff, NY 10510

3597 County Rte 7
Hillsdale, NY 12529

P.O. Box 471
Hillsdale, NY 12529

3588 County Route 7
Hillsdale, NY 12529

3567 County Route 7
Hillsdale, NY 12529

1110 Rte. 7A
Hillsdale, NY 12529

1029 County Route 7A
Hillsdale, NY 12529

805 Heather Ln
Altamont, NY 12009

P.O. Box 493
Saugerties, NY 12477

121 S 17th St
Mattoon, MA 61938

3528 County Route 7
Hillsdale, NY 12529

17 Carleton Ave
Briarcliff, NY 10510

4731 B Storkwood Lane - A
Boynton Beach, FL 33436

912 Overlook Rd
Hillsdale, NY 12529

912 Overlook Rd
Hillsdale, NY 12529

1002 Center Hill Rd 8C
Hillsdale, NY 12529

P.O. Box 442
Craryville, NY 12521

186 Riverside Drive
New York, NY 10024

556 E 87Th St
New York, NY 10128

1002 Center Hill Rd 8C
Hillsdale, NY 12529

274 Sky Farm Rd
Copake, NY 12516

288 Sky Farm Rd
Copake, NY 12516

76 Birch Hill Rd
Craryville, NY 12521

17 Carleton Ave
Briarcliff, NY 10510

247 Texas Hill Rd
Hillsdale, NY 12529

247 Texas Hill Rd
Hillsdale, NY 12529

P.O. Box 442
Craryville, NY 12521

73 County Route 11-A
Craryville, NY 12521

47 Freuh Rd
Hillsdale, NY 12529

61 Bloody Hill Rd
Craryville, NY 12521

112 Spring St
Craryville, NY 12521

47 Frueh Rd
Hillsdale, NY 12529

2 Taconic St
Copake, NY 12516

5854 Beverly Dr
Hudson, FL 34667

100 Cambridge Rd
Hillsdale, NY 12529

129 Cambridge Rd
Hillsdale, NY 12529

101 Vincent Rd
Hicksville, NY 11801

101 Vincent Rd
Hicksville, NY 11801

97 Roxbury Rd
Hudson, NY 12534

145 Norman Ave
Brooklyn, NY 11222

P.O. Box 146
Hillsdale, NY 12529

34 Pond Hill Rd
Craryville, NY 12521

4160 County Route 7
Craryville, NY 12521

6 Riverview Farm Rd
Ossining, NY 10562

1072 Center Hill Rd
Copake, NY 12516

1810 State Route 23
Craryville, NY 12521

97 Roxbury Rd
Hudson, NY 12534

4226 County Route 7
Craryville, NY 12521

18 Fiske Pl
Brooklyn, NY 11215

P.O. Box 146
Hillsdale, NY 12529

85 Gage Rd
Brewster, NY 10509

252-56 63rd Ave
Little Neck, NY 11362

252-56 63rd Ave
Little Neck, NY 11362

329 W 38th St Apt A03
New York, NY 10018

32 Deana Loop
LaGrangeville, NY 12540

245 W 104Th St
New York, NY 10025

34 Pond Hill Rd
Craryville, NY 12521

18 Fiske Pl
Brooklyn, NY 11215

102 Sky Farm Rd
Copake, NY 12516

AREA RESIDENTS

Joseph Kasper
153 Two Town Road
Hillsdale, NY 12529

LOCAL DOCUMENT REPOSITORIES

Town of Copake Town Hall
230 Mountainview Road
Copake, NY 12516
Tel: (518) 329-1234

Roeliff Jansen Community Library
9091 State Route 22
Hillsdale, NY 12529
Tel: (518) 325-4101

APPENDIX E.

USFWS IPaC OFFICIAL SPECIES LIST

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
Phone: (607) 753-9334 Fax: (607) 753-9699
http://www.fws.gov/northeast/nyfo/es/section7.htm

In Reply Refer To: July 20, 2020
Consultation Code: 05E1NY00-2020-SLI-3718
Event Code: 05E1NY00-2020-E-11172
Project Name: Shepherd's Run Solar Project

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). This list can also be used to determine whether listed species may be present for projects without federal agency involvement. New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list.

Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list. If listed, proposed, or candidate species were identified as potentially occurring in the project area, coordination with our office is encouraged. Information on the steps involved with assessing potential impacts from projects can be found at: http://www.fws.gov/northeast/nyfo/es/section7.htm

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/

eagle_guidance.html). Additionally, wind energy projects should follow the Services wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the ESA. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
(607) 753-9334

Project Summary

Consultation Code: 05E1NY00-2020-SLI-3718

Event Code: 05E1NY00-2020-E-11172

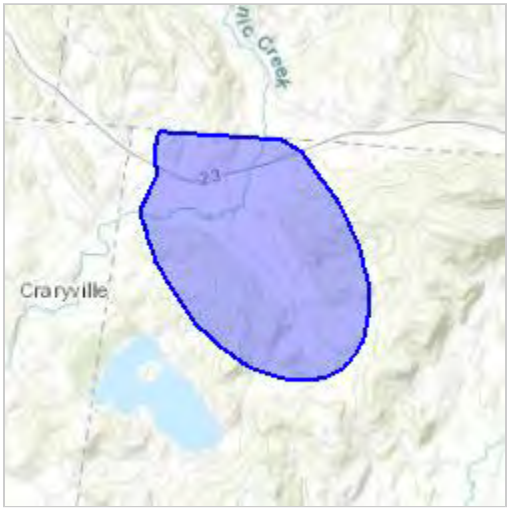
Project Name: Shepherd's Run Solar Project

Project Type: POWER GENERATION

Project Description: Hecate Energy Columbia County 1 LLC is proposing to build the Shepherd's Run Solar Project, a 60-MW solar power facility in the Town of Copake, Columbia County, NY.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/42.163504499817904N73.57671355105924W



Counties: Columbia, NY

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Indiana Bat *Myotis sodalis*	Endangered

There is **final** critical habitat for this species. Your location is outside the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/5949

Reptiles

NAME	STATUS
Bog Turtle *Clemmys muhlenbergii*	Threatened

Population: Wherever found, except GA, NC, SC, TN, VA
No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/6962
Species survey guidelines:
https://ecos.fws.gov/ipac/guideline/survey/population/182/office/52410.pdf
Habitat assessment guidelines:
https://ecos.fws.gov/ipac/guideline/assessment/population/182/office/52410.pdf

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.